PACIFIC EXCHANGE

Draft Environmental Impact Report

San Francisco Planning Department
San Francisco Redevelopment Agency

97.717E
State Clearinghouse No. 98061003

Draft EIR Publication Date: July 25, 1998
Draft EIR Public Hearing Date: August 27, 1998
Draft Public Comment Period: July 25 to September 9, 1998

Written comments should be sent to:

The Environmental Review Officer
San Francisco Planning Department
1660 Mission Street
San Francisco, CA 94103

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DATE: July 25, 1998

TO: Distribution List for the Pacific Exchange Project Draft EIR

FROM: Hillary Gitelman, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the Pacific Exchange project (Planning Department File No. 97.717E)

This is the Draft of the joint City Planning Department and San Francisco Redevelopment Agency Environmental Impact Report (EIR) for the Pacific Exchange project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" that will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who comment on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission and the San Francisco Redevelopment Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one, rather than two, documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them. If you would like a copy of the Final EIR, therefore, please fill out and mail the postcard provided inside the back cover to the Major Environmental Analysis Office of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

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I. SUMMARY

A. PROJECT DESCRIPTION

The project sponsors are the Pacific Exchange (Exchange) and the San Francisco Redevelopment Agency (SFRA). The project would expand the existing Rincon Point-South Beach Redevelopment Area by approximately 60,000 square feet, demolish two existing buildings, construct a new facility above grade for the Exchange, and construct a three-level parking garage below grade for the City. The new facility would be an approximately 425,500-gross-square-foot building to house the Pacific Exchange, its members, and its clearing firms. The Exchange operates a national securities marketplace for trading stocks, bonds, other equity products, and equity and index options. The Exchange would house about 3,260 employees by the year 2010. The project would consolidate the activities of the Pacific Exchange and its related operations, including 1,500 employees currently, now located in space leased in five buildings in the Financial District.

The project site is in the South of Market area of San Francisco, on the north side of Folsom Street between Main and Spear Streets (Lots 27, 29, 30, 31, and 32 of Assessor's Block 3740), and is approximately 54,000 square feet in size. Most of the site is presently used as public surface parking lots. Two one-story, 15-foot-tall commercial structures that occupy about 12,000 square feet of the site, along Folsom Street, would be demolished. The City owns about one-half of the site; the three parcels fronting Folsom Street are under private ownership. In place of these buildings and the parking lots, the project would construct a new, 17-story, 234-foot-tall tower (252 feet to top of mechanical penthouse). The project would include a three-level public parking garage below grade and space for Exchange operations above grade. The project site is proposed to be vertically subdivided so that the Exchange would own the air space and building above grade and the City, and/or a City-sponsored non-profit corporation, would own the below-grade portion of the site. The about 160,400-gross-square-foot garage would accommodate about 400 automobiles as a self-park garage or about 550 automobiles as a valet-park garage, as it would probably be operated. Access for the proposed parking garage would be via a two-way ramp on Spear Street.

Above the garage, the building would contain about 425,500 gross square feet of space in two main components: a five-story Trading and Technology Center, consisting of about 143,100 gross square feet, and an office tower, consisting of about 274,000 gross square feet above the Trading and Technology Center. The Trading and Technology Center would cover the entire site (except for a 15-foot setback from the Folsom Street property line) and occupy floors one through five. It would house the equities and options trading floors, technology and data center, and related support facilities and services. The tower, consisting of floors six through 17, would occupy the southern half of the site and provide office space. The main pedestrian entrance and lobby for the building would front Folsom Street at the southeast corner of the site. The ground floor would contain about 8,400 gross square feet of retail space. Three off-street loading spaces are proposed, with access from Main Street. The project would demolish the existing 12,000 gross square feet of building space and construct 586,000 gross square feet for the parking garage and Exchange facility, a net increase of about 574,000 gross square feet. As defined by the Planning Code, the project would have a floor area ratio of 7.8:1, excluding the parking garage. The elimination of about 264 existing parking spaces and the creation of up to 550 parking spaces (valet park) would result in a net increase of about 286 spaces.

The project requires: amendment of the *Downtown Plan*, an Area Plan of the *San Francisco General Plan*, to designate the project site C-3-O (SD) (Downtown Office [Special Development]) and include the project site within a 250-S Height and Bulk district; amendment of the *Rincon Point-South Beach Redevelopment Plan* to include the site; and amendment of the *Rincon Point-South Beach Redevelopment Project Area Design for Development* document to establish design objectives, standards, and guidelines to regulate and control development of the project.

On December 18, 1997, the City Planning Commission amended the Rincon Point-South Beach Project Area Preliminary Plan to allow the City of San Francisco and the SFRA to consider the appropriateness of the above-described actions.

B. MAIN ENVIRONMENTAL EFFECTS

The Initial Study published on May 30, 1998, found that land use and visual quality would not cause potential significant environmental effects and required no further analysis. Those topics are included in the EIR for informational purposes. (See Appendix A, p. A.1, for the Initial Study.) Based on the analyses prepared for this EIR and summarized here, no significant project-specific impacts have been identified. Whether or not the project is approved and constructed, traffic volumes and transit loadings in the site vicinity are projected to increase. These increases would lead to congestion, and potentially significant cumulative impacts may result. Cumulative increases in traffic congestion may in turn cause cumulative increases in criteria pollutants, and a degradation of air quality. The project would incrementally contribute to these potential cumulative effects.

LAND USE, PLANS AND ZONING (p. 34)

The project site is located in the southern portion of the block bounded by Howard, Folsom, Main, and Spear Streets. The site is in a C-3-S (Downtown Support) and a P (Public) use district, and a 200-S Height and Bulk district. The balance of the project block is in a C-3-O (SD) (Downtown Office [Special Development]) use district, and a 200-S Height and Bulk district. As noted above, the project proposes changes in use and height and bulk designations for the site to other designations that now exist in the vicinity, or that would be transitional: C-3-O (SD) (Downtown Office [Special Development]), and a 250-S Height and Bulk District. The project would increase the density of land uses at the site and change the character of the block bounded by Howard, Folsom, Main, and Spear Streets. The project would extend the Financial District further into the South of Market area. South of Market is a transition area between high-rise office uses to the north and mixed office, residential and commercial, predominantly low-rise uses and surface parking to the south. Residential uses exist and are being developed in Rincon Hill and in the Rincon Point-South Beach Redevelopment Area.

VISUAL QUALITY AND URBAN DESIGN (p. 47)

The proposed building would be of similar height as newer buildings in the project block such as the adjacent 230-foot-tall building at 221 Main Street, the 250-foot-tall building at 211 Main Street, and the 245-foot-tall building at 201 Spear Street. The project would be taller than older buildings south of the site and the 220-foot-tall Hills Plaza Building on the southwest corner of Spear and Folsom Streets. The 234-foot (252 feet to top of mechanical penthouse) project would be shorter than the approved Gap building, which would rise 287 feet, across Spear Street. The Folsom Street frontage would be set back about 15 feet from the property line. This would respond to the Folsom Boulevard design, including 25-foot widened sidewalks, under consideration in the Transbay Concept Plan. With a steel-framed glass facade, the project would continue the variety of massing and materials found in newer developments in the vicinity. The building would be prominent in views from nearby locations on Folsom Street, Main Street, and Spear Street south of the site. From the north on Spear or Main, views of the project would be limited because of intervening high-rise buildings. From The Embarcadero and planned Rincon Point Park east of the site, views of the project would be limited by the approved Gap building. The project would be partially visible from longer-range view points, such as Twin Peaks or Potrero Hill, as part of overall views of the Financial District. Such views would be limited by existing, intervening high-rise buildings. The project would not be a visually prominent skyline building. That is, in longer range views, the project would fit within and/or below the skyline of existing downtown development.

SHADOW AND WIND (p. 56)

At particular times of the day and year, the project would cast new shadow on existing and planned open spaces, including the widened sidewalk in front of 221 Main Street, the private patio on the podium of 221 Main Street, and the approved Rincon Point Park east of The

Embarcadero roadway. The project would have its greatest effect on Rincon Point Park at 3:00 p.m. PST on December 21 when it would newly shade a roughly 20-foot-wide strip, completing the shading of the park north of Folsom Street; the approved Gap building will shadow most of the planned park at that time. The project would affect the private, podium-level patio open space at 221 Main Street at 10:00 a.m. year round, particularly in March and September, when the area would be completely shaded by the project. For the rest of the day and year, project shadow impacts would be less. None of the areas affected by new shadow from the project are under the jurisdiction of the Recreation and Park Department. Therefore, the project would not newly shade any open space protected by Section 295 of the Planning Code.

Wind tunnel tests included three scenarios: existing conditions, conditions with the project, and conditions with the project and the approved Gap building. In the existing wind environment, wind speeds range from 4 to 17 miles per hour, and 14 of 35 locations tested now exceed the 11 mph pedestrian comfort criterion. With the project, wind speeds would range from 5 to 15 miles per hour, and 22 of the 35 test locations would exceed the comfort criterion. The locations where the comfort criterion is now exceeded would continue to experience exceedances; additional locations would also experience exceedances of the 11 mph standard, primarily at the intersection of Spear and Folsom Streets, and north of that intersection along Spear Street. The wind environment of the project in the context of the approved Gap building would be similar to that of the project by itself; wind speeds would range from 3 to 16 miles per hour, and 20 of the 35 test locations would exceed the comfort criterion. Compared to the results for the project alone, the Gap building and the project would together eliminate exceedances at three locations along the east sidewalk of Spear Street and add one location along the west side of Spear Street, adjacent to the project site. As with the project by itself, three of the locations where the criterion would be newly exceeded would be at the intersection of Spear and Folsom Streets, and north of that intersection on the west side of Spear Street. The project would not cause any exceedances of the hazardous wind speed criterion, under any scenario tested.

TRANSPORTATION, CIRCULATION, AND PARKING (p. 74)

The project would result in about 11,200 daily person trips, of which about 440 would occur during the p.m. peak hour, and the project would result in about 90 weekday p.m. peak hour vehicle trips. Because financial markets heavily rely on communications with the East Coast, about 75% of Exchange-related commuters would arrive before the a.m. peak hour and leave before the p.m. peak hour, corresponding with business hours under Eastern Standard Time. The project would result in little or no increase in delay at area intersections and therefore would not affect levels of service. Regarding transit use, the project would increase MUNI ridership from the existing 70% to 71% of capacity, or 1%; levels would remain within MUNI's service standard of 100% of seated and standing capacity in transit vehicles; therefore, the project alone would not substantially affect the peak-hour capacity conditions.

The Exchange would replace site parking, including 264 self-park surface parking spaces. The project would provide about 550 valet-park spaces and would generate a parking demand of about 750 spaces, causing a shortfall of about 200. This shortfall in available parking would be part of an estimated future shortfall of about 825 spaces in the project area, assuming development of other parcels that would remove other existing parking. A parking shortfall would result in people parking farther from their destinations or switching to another mode of transportation. Regarding loading, the project could result in a shortfall of about two truck loading spaces during the peak loading hour assuming all deliveries would use large trucks; because the trucks and vans used for most Exchange deliveries would be relatively small based on current Exchange use, the proposed three loading spaces would likely accommodate foreseeable deliveries. The project would result in continued acceptable pedestrian levels of service.

Future year 2015 traffic conditions would cause the intersection of Folsom Street/Main Street to worsen from LOS B under existing conditions to LOS D with the existing street network. Under both the existing street network and the Transbay street network, year 2015 traffic would cause the intersections of Folsom Street/The Embarcadero, Howard Street/Main Street, and Harrison Street/First Street to operate at LOS E or F during the weekday PM peak hour. The LOS E or F conditions at these intersections would be the result of existing conditions or future cumulative, traffic, and not the result of traffic generated by the project by itself; project-related traffic would cause little change in average vehicle delays.

The projected growth in MUNI ridership by the year 2015 baseline is expected to exceed the operating capacity for MUNI Northeast, Northwest and Southwest screenlines. The project contribution to cumulative transit ridership would be less than 1%, and therefore the project alone would not substantially affect peak hour cumulative capacity conditions.

AIR QUALITY (p. 102)

The primary source of air pollutants from the project would be motor vehicles. Because the Bay Area air basin sometimes violates state and federal standards for ozone, particulate matter, and carbon monoxide, the California Air Resources Board computer model URBEMIS5 was used to estimate project-related emissions for criteria air pollutants, including reactive organic gases and nitrogen oxides (ozone precursors), respirable particulates, and carbon monoxide. *Bay Area Air Quality Management District CEQA Guidelines* require detailed analysis of carbon monoxide emissions if project emissions would exceed 550 pounds per day. The project would emit about 498 pounds per day; therefore, no further analysis is required. Routine project operations would emit about 55 pounds per day of reactive organic gases, 38 pounds per day of nitrogen oxides, and 4 pounds per day of particulates. The Bay Area Air Quality Management District considers emissions of 80 pounds per day of any of these substances to exceed the significance criterion under CEQA; therefore, the effect of the project would be less than significant. Cumulative increases in traffic congestion may in turn cause cumulative increases in criteria pollutants, and a degradation of air quality. The project would incrementally contribute to these potential cumulative effects.

C. MITIGATION MEASURES (p. 111)

Some primary measures identified in this report to mitigate potentially significant environmental effects are summarized below. Mitigation measures are presented in full on pp. 111-114. Mitigation measures are not available to reduce the cumulative air quality impacts to which the project would incrementally contribute.

NOISE

1. To minimize effects from piledriving the Exchange would require project construction contractors to predrill holes; use construction equipment with state-of-the-art noise shielding and muffling devices; and schedule pile driving activity for times of the day that would minimize disturbance to neighbors.

AIR QUALITY

2. The Exchange would require its contractors to spray the site with water (nonpotable water as required by San Francisco Ordinance 175-91) and sweep surrounding streets during demolition, excavation, and construction activities; spray unpaved construction areas twice a day; and cover stockpiles of soil, sand, and other material; and cover trucks hauling debris, soils, sand, or other such material.

GEOLOGY

3. The project includes one or more geotechnical investigations by a California-licensed geotechnical engineer. The Exchange and its contractors would follow the recommendations of the final geotechnical reports regarding any excavation and construction for the project, including a pre-construction survey of existing conditions, and monitoring the adjacent building for damage during construction.

4. If dewatering were necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering, including whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Exchange would retain a Special Inspector to perform monitoring, and determine if groundwater recharge would be necessary to halt settlement. The Exchange would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the Exchange.

If dewatering were necessary, the Exchange and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

5. The Exchange and its contractor would install necessary settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

WATER QUALITY

6. If dewatering were necessary, the Exchange would treat, if necessary, pumped groundwater prior to discharge to the combined sewer system.

   If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if necessary, to reduce the amount of sediment entering the combined sewer system.

   The Exchange would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if necessary.

HAZARDS

7. The Exchange would ensure that building surveys for asbestos, PCBs, lead, mercury, and other possible hazardous materials would be performed prior to the start of demolition, and abatement would be carried out according to local, state, and federal laws, regulations, and standards.

CULTURAL RESOURCES

8. The Exchange would retain an archaeologist to conduct a pre-excavation testing program. If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

If necessary, the Exchange would implement additional measures such as a program of on-site monitoring of all site excavation. If evidence of cultural resources were found, the archaeologist would immediately notify the Environmental Review Officer, and the Exchange would halt any potentially damaging activities. Ground disturbing activities could be suspended for a total maximum of four weeks over the course of construction. The archaeologist and the Environmental Review Officer would then recommend what measures should be implemented to minimize potential effects on archaeological resources, including possible archaeological testing, exploration or recovery programs. After implementation of such measures, the archaeologist would prepare a report documenting the cultural resources that were discovered, and an evaluation as to their significance.

D. ALTERNATIVES (p. 117)

ALTERNATIVE A: NO PROJECT

The no project alternative would entail no change to the site. The proposed project would not be built. The existing commercial buildings and surface parking lots would remain. The Downtown Plan would not be amended to include the project in a C-3-O (SD) District and 250-S Height and Bulk District, and the San Francisco Redevelopment Agency and the City Planning Commission would not consider amendment of the *Rincon Point-South Beach Redevelopment Plan* and Design for Development document to incorporate the project site.

Under the no project alternative, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would be generally as described in the environmental setting sections of Chapter III. Land use, site views, and shadow and wind conditions would not change. Future transportation and air quality conditions described as base conditions with cumulative development would occur but without the project. Therefore, this alternative would not contribute to cumulative transportation and air quality impacts. Because a portion of the site is zoned for office and office support uses, that portion could be developed in the future under the existing C-3-S use district controls. The portion of the site presently zoned P for public use could be developed under P use district controls or rezoned.

ALTERNATIVE B: TRADING AND TECHNOLOGY CENTER, AND SHORTER TOWER

The shorter tower alternative would accommodate the Trading and Technology Center only, and would not provide office space for Exchange members and clearing firms. A shorter tower would rise two levels above the five-story Trading and Technology Center for a total of seven floors, compared to 17 floors as proposed with the project. The building would be about 100 feet tall, compared to 234 feet with the project. With this alternative, the Downtown Plan of the General Plan would be amended to include this alternative within a C-3-O (SD) use district but the site would remain in a 200-S Height and Bulk District. The floor area devoted to the Trading and Technology Center and retail uses would remain the same, and an additional 45,700 gross square feet would be offices, compared to 274,000 gross square feet with the project. With this alternative, the Exchange Facility would contain about 197,200 gross square feet instead of the 425,550 gross square feet with the project. This alternative would include an employee population of about 2,890, compared to the 3,260 employees projected to occupy the proposed project by 2010.

Most impacts of this alternative would be similar but proportionally less than those of the project.

Regarding land use and plans, the shorter tower alternative would change the intensity of land use and would serve to expand the Financial District, as with the project. This alternative would change the visual character of the area, as with the project. The shorter tower would be visible from nearby viewpoints on Folsom, Main, and Spear Streets. This alternative would be about one-half the height of the project, and generally shorter than the existing buildings on the Howard-Folsom-Main-Spear block which range from about 80 to about 240 feet in height. From The Embarcadero and Herb Caen Way at Folsom Street toward the west, the approved Gap building will be prominent in the foreground, as with the project. The shorter tower would be less noticeable in mid- to long-range views, than the project. This approximately 100-foot-tall alternative would have fewer shadow effects than the project. Overall, the area shaded by this alternative would be about one-half of that of the proposed project. This alternative would not shade approved Rincon Point Park at 3:00

p.m. on December 21, as would the project. As with the proposed project, this alternative would not result in hazardous wind conditions. Wind speeds at 28 of the 35 study locations with this alternative would be within 2 miles per hour of those for the project. This alternative would increase the number of locations exceeding the pedestrian comfort criterion by one, from 14 to 15 fewer than the project, which would increase the number of locations from 14 to 22. Therefore, wind effects would be less than with the project.

With this alternative, less floor area and fewer employees would result in less effect on intersection levels of service, transit demand, and pedestrian conditions. Like the project, which would not have significant impacts related to intersection levels of service, transit, and pedestrian conditions, the alternative would have even less impact. This alternative would have mid-day parking demand of 670 spaces and would result in a parking deficit of 120 spaces, compared to a deficit of about 200 with the project. As with the project, this alternative would not exceed project significance thresholds determined by the Bay Area Air Quality Management District; its impacts would be correspondingly less, as noted. Because this alternative would generate the fewest vehicle-trips of the project and alternatives reviewed in this EIR, Alternative B, combined with the No On-Site Parking Variant, would be considered the environmentally superior alternative. This alternative would reduce contributions to cumulative transportation and air quality effects, although those cumulative effects would still occur.

The Exchange has rejected this alternative because it would not achieve its objective of consolidating its operations in one place, which the Exchange regards as critical to its continued success. This alternative would not house the clearing firms in an essential facility, thereby threatening activities in the event of an earthquake or major disaster.

ALTERNATIVE C: MAIN STREET ORIENTATION, TALLER TOWER ALTERNATIVE

During schematic design of the project, the Exchange considered a design alternative with an office tower oriented to the Main Street frontage, compared to the Folsom Street orientation of the proposed office tower. The five-story Trading and Technology Center base would be developed as with the proposed project. Because the Main Street frontage of the project site is about 180 feet, compared to 275 feet for the Folsom Street frontage, and because, under this alternative, the tower would not bridge the trading floor, this alternative would have a taller, free-standing 21-story, 282-foot (to the roof) tower, compared to a 17-story, 234-foot tower with the project. Floor area and uses, including the parking garage, would be the same as with the project.

With the same uses and floor areas, this alternative would have the same effects on land use, transportation, and air quality as with the project. As with the project, the alternative would contribute to a parking shortfall in the study area, and would contribute to cumulative transportation and air quality effects.

This alternative's taller tower would be visible from nearby locations on Folsom, Spear, and Main Streets, and would be about 30 feet taller than the adjacent 221 Main Street building. Overall, the alternative would be more prominent in long-range views than the proposed project. The greater height with this alternative would create correspondingly longer shadows. However, like the project, it would not shade open space under the jurisdiction of the Recreation and Park Department. This alternative would add somewhat more shade to planned Rincon Point Park east of the project site, during afternoon hours in late fall and winter months. Street-level wind effects would be expected to differ little from those with the proposed project. As with the project, there would be some increase of locations at which pedestrian comfort criterion would be exceeded, although these additional locations could be shifted somewhat from those of the project. The alternative would not be expected to cause exceedance of the hazardous wind criterion.

The Exchange rejected this alternative because, while it would achieve project objectives, the greater number of smaller floors would result in less efficient space in the tower, greater construction costs, and greater expense to build as an essential facility.

ALTERNATIVE SITES CONSIDERED AND REJECTED

The Exchange considered a proposal to renovate the existing seven-story building at 633 Folsom Street to meet the office needs of members and clearing firms and to construct a new seven-story building on its adjacent surface parking lot for the Trading and Technology Center and Exchange administration. The Exchange also considered a proposal to renovate a portion of the San Francisco Fashion Center building at Eighth and Townsend Streets. In both instances, the Exchange concluded the proposals would not meet the needs of the project in an economically feasible way. In each instance, existing buildings would not have been renovated as essential facilities.

E. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Responses received to the Notice of Preparation of the EIR, dated May 30, 1998, identified areas of concern regarding the project:

- Potential 24-hour trading operation;
- The design of the Pacific Exchange in relation to the requirements of the City Planning code;
- Loss and replacement of 27 mature trees on the project site;
- The role of Redevelopment and the provision of a garage at this location.

II. PROJECT DESCRIPTION

A. PROJECT SPONSORS' OBJECTIVES

The project sponsors are the San Francisco Redevelopment Agency (SFRA) and the Pacific Exchange (Exchange). The proposed project would expand the existing Rincon Point-South Beach Redevelopment Area by approximately 60,000 square feet, demolish two existing buildings, construct a new facility above grade for the Exchange, and construct a three-level parking garage below grade for the City (the Parking Garage). The Exchange operates a national securities marketplace for the trading of stocks, bonds, other equity products, and equity and index options. The Exchange, its 552 members, and its clearing firms[1] currently employ about 1,500 individuals; by the year 2010, they expect to employ about 3,260 individuals. Of this number, the current trading floor population is about 1,000; by 2010, it is expected to be about 2,100. Most of the people who occupy the trading floors from time to time during the day currently maintain offices elsewhere in space leased by the Exchange, its members, and its clearing firms. These entities currently occupy all, or portions, of five separate, older buildings generally located within the block bounded by Sansome, Pine, Montgomery, and Bush Streets (primarily at 301 Pine Street and 220 Montgomery Street).

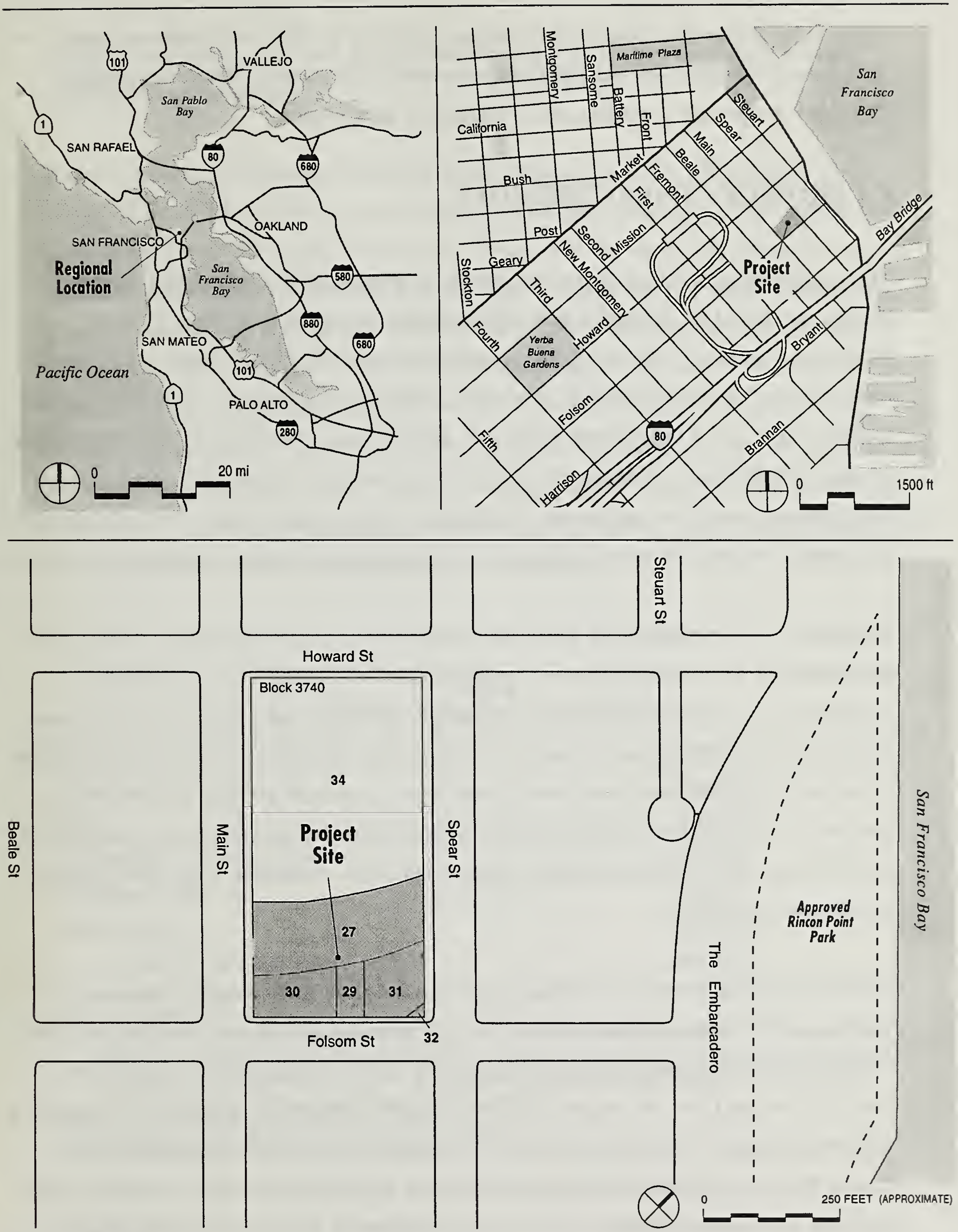
The Exchange intends to meet its trading needs and the needs of its members and clearing firms by constructing the Exchange facility in which to consolidate Exchange operations currently located in the Financial District and accommodate their growth at least through the year 2010. The activities of the Exchange necessitate certain program requirements and the features of the Exchange facility required to meet these needs are described under Project Characteristics below. Because the Exchange competes with other exchanges elsewhere in the United States on the basis of cost as well as product types and service, the Exchange must meet these needs economically to remain competitive.

Project objectives of the SFRA and the City (which owns a portion of the project site) include the following: to consolidate small, irregularly shaped and under-developed parcels to provide a site of suitable size for a cornerstone development consistent with current planning for the area, which would permit the Folsom Boulevard building setback currently contemplated by both the SFRA and the Planning Department; to retain the Exchange headquarters in San Francisco; to replace the existing parking on the site and partially meet the expected demand for parking to serve the mixed office, retail, restaurant and residential development planned for the project vicinity (and the new Giants ballpark) through a parking garage with a rate structure consistent with the City's "transit first" policy; and accomplish the foregoing through a public-private partnership.

In the view of project sponsors, required amendment of the *Rincon Point-South Beach Redevelopment Plan* would enable the SFRA to use redevelopment powers to remedy blight that now characterizes the site and facilitate development of the project, if the Redevelopment Agency deems such use necessary and desirable, and to establish land use standards to regulate and control development of the project.

B. PROJECT LOCATION

As shown in Figure 1, the project site is in the South of Market area of San Francisco, occupying the north side of Folsom Street between Main and Spear Streets. The site consists of Lots 27, 29, 30, 31, and 32 of Assessor's Block 3740, and is approximately 54,000 square feet in size. Lot 27 was a California Department of Transportation (Caltrans) right-of-way for a section of the elevated Embarcadero Freeway until the freeway was demolished following the 1989 Loma Prieta earthquake. Lot 27 is now owned by San Francisco and is held under the administrative jurisdiction of the Department of Real Estate; the remaining lots are privately owned and would be acquired by the Exchange or the SFRA. Currently, the City leases Lot 27 to a private operator for use as a surface public parking lot. Lots 31 and 32 are also operated as a surface public parking lot, and all the parking lots together have a total of 264 spaces. Lots 29 and 30 contain two adjacent, one- to two-story structures that occupy about 12,000 square feet of the site. The building on Lot 30 is retail space



Source: EIP Associates

EIP

Project Location Figure 1

Pacific Exchange EIR

occupied by Books, Inc. Outlet. The building on Lot 29 is office and warehouse space. Lot 27 is zoned P (Public), and the other lots are zoned C-3-S District (Downtown Support). The entire project site is within a 200-S Height and Bulk district.

C. PROJECT CHARACTERISTICS

The existing buildings at the project site would be demolished and the existing surface parking lots would be eliminated to accommodate the construction of a new 17-story, 234-foot-tall building. The new building would include the Exchange facility, with about 425,500 gross square feet (gsf) of space above grade for the Exchange, its members and its clearing firms, and a 160,350 gsf, three-level parking garage below grade, for a project total of about 585,850 gsf. As proposed, the project site would be subdivided vertically so that the Exchange would own and operate the Exchange facility (the portion of the building above the garage) and the City would own the Parking Garage (the portion of the site below grade).

The garage would accommodate about 400 automobiles as a self-park garage or about 550 automobiles as a valet-park garage. It would be operated by the City or a non-profit corporation as a valet-park, public parking garage. If the parking garage were not operated by the City (or a City-sponsored non-profit corporation), it could be owned by the Exchange or another commercial entity that would implement a short-term parking rate structure as specified in Planning Code Section 155(g). In either event, the garage would be available for non-Exchange uses, such as the Giants ballpark and office, restaurant, retail and residential development in the area.

Above the parking garage, the Exchange Facility would contain two main components: a Trading and Technology Center of about 143,100 gross square feet, and an office tower of about 274,000 gross square feet above the Trading and Technology Center. As defined by the City Planning Code, the project Floor Area Ratio (FAR) would be about 7.8:1, excluding the parking garage. As discussed below, the Exchange would seek amendments to the Rincon Point - South Beach Redevelopment Plan to include the site, and amendments to the Plan and the companion Design for Development document that would establish land use controls, design objectives, and development standards for the site that would regulate development of the project.

Figures 2 through 8 illustrate representative floor plans, elevations, and a typical cross-section of the project; Table 1 presents the anticipated space allocation. The Trading and Technology Center (floors one through five) would cover the whole site (exclusive of a 15-foot setback from the Folsom Street property line) and house the Exchange's equities and options trading floors, a technology and data center, and related support facilities and services, including retail space. The tower (floors 6 through 17) would have a smaller footprint occupying the southern half of the site. It would provide office space for the Exchange administration, members, clearing firms, other Exchange-related firms, and (on a space-available basis) other users. There would be a Visitors Gallery viewing space on the fourth floor. By 2010, the Exchange, its members, and clearing firms would be expected to occupy the entire building with roughly 3,260 employees.

TABLE 1
PROJECT SPACE ALLOCATION

Use	Space (gsf)
Office	274,000
Retail	8,400[a]
Trading and Technology Center	143,100
Exchange Facility	**425,500**
Parking Garage	160,350
Total Gross Floor Area	**585,850**

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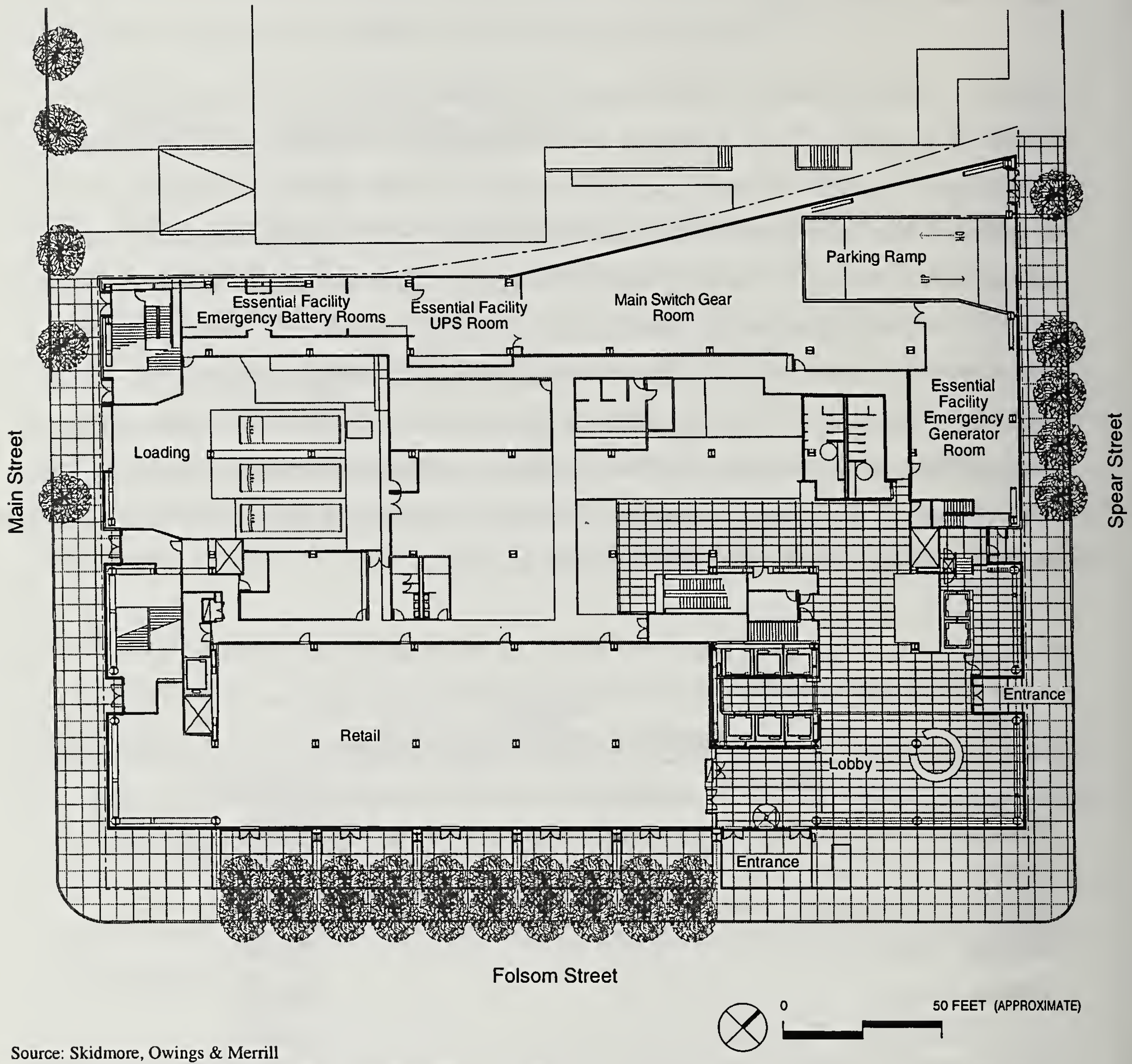
gsf - gross square feet

a. Of the 8,400 gsf of retail space, 5,000 square feet would not count as floor area in calculating FAR under City Planning Code section 102.9 (b) (12), which excludes from gross floor area calculations in C-3 districts up to 5,000 square feet of ground floor or mezzanine space designated to meet the convenience needs of downtown residents and workers.

Source: Pacific Exchange; Skidmore, Owings & Merrill

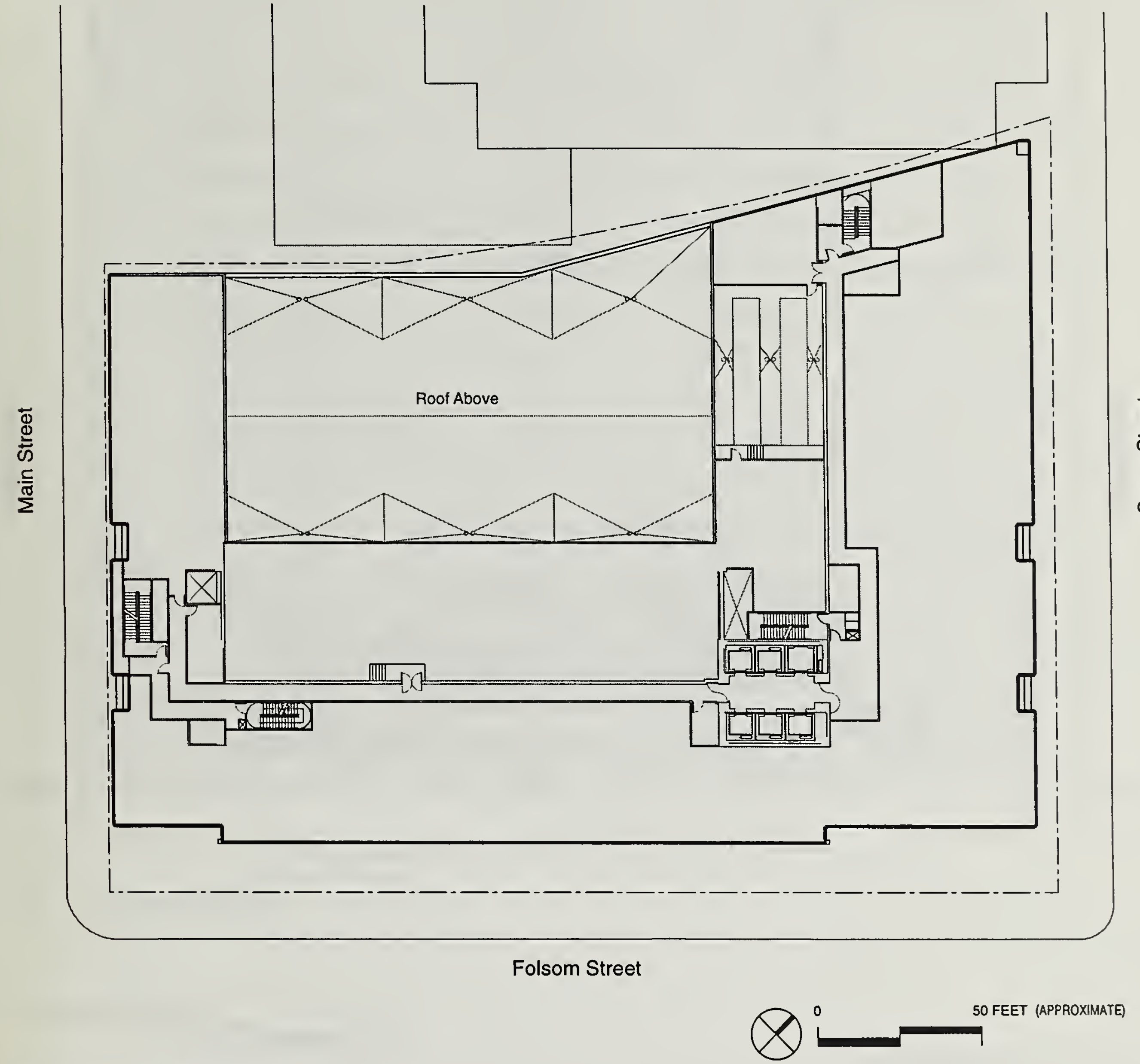


Source: Skidmore, Owings & Merrill

EIP

Ground Level Floor Plan Figure 2

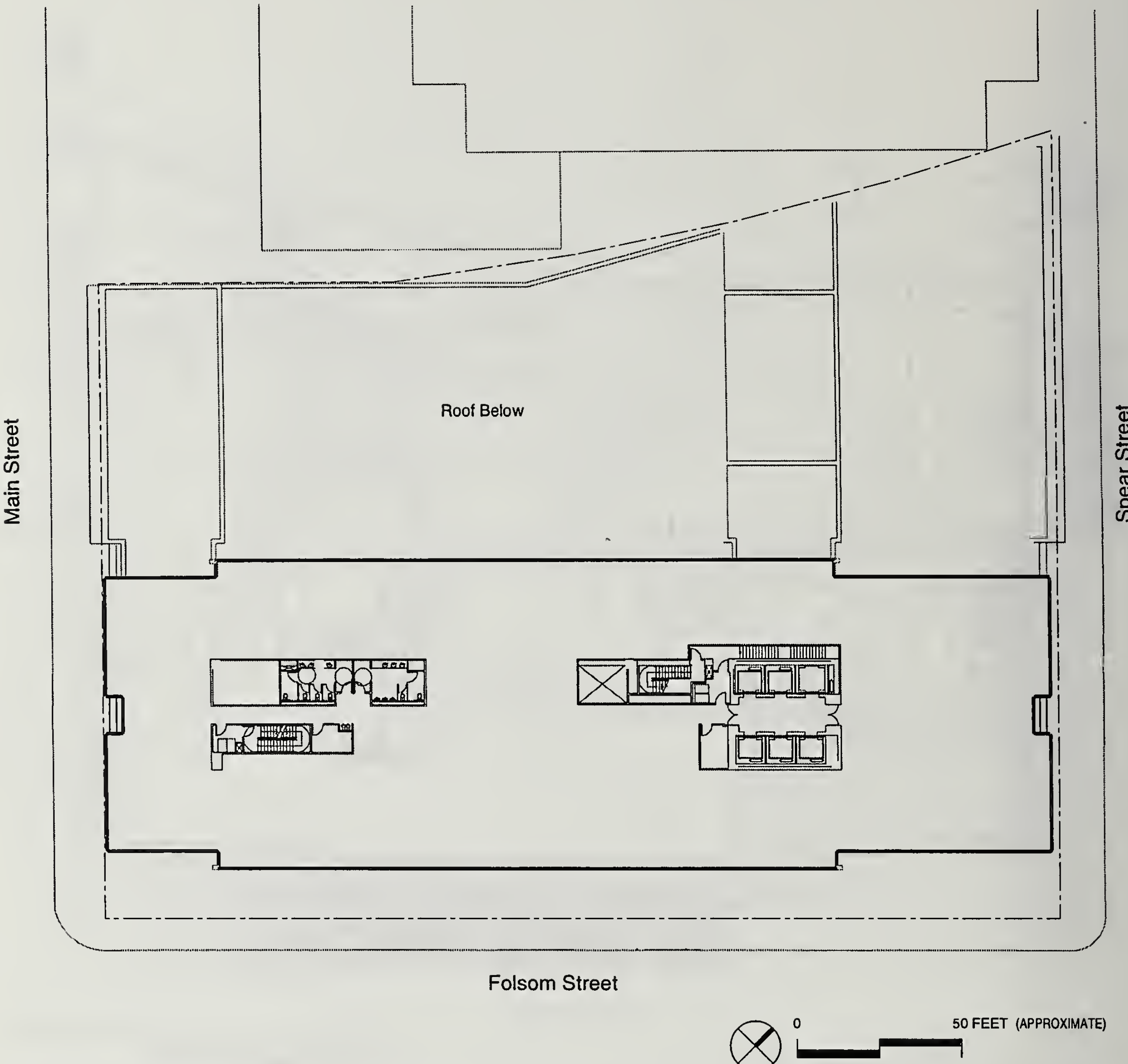
Pacific Exchange EIR



Source: Skidmore, Owings & Merrill

EIP

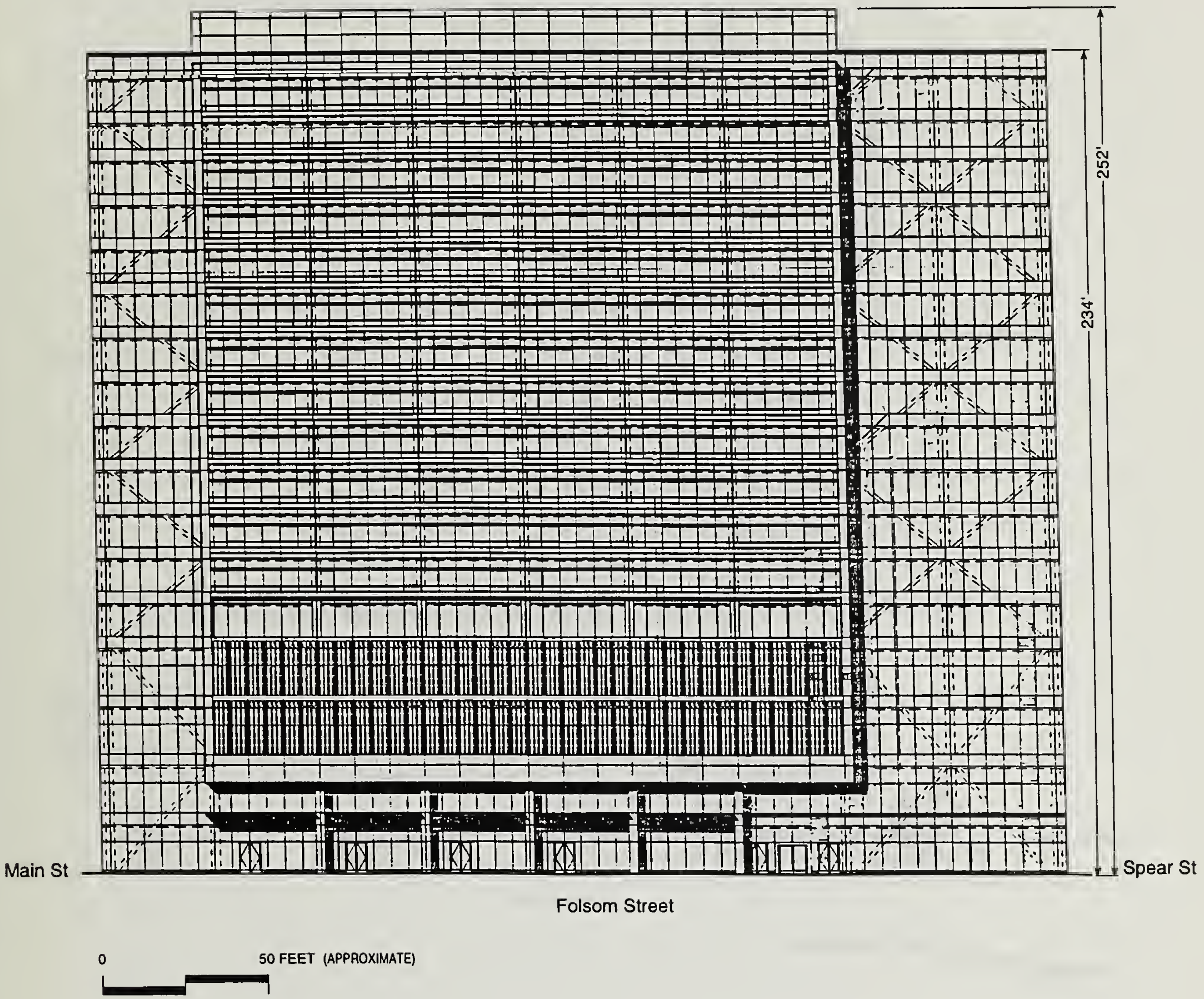
Typical Trading and Technology Center Floor Plan Figure 3
Pacific Exchange EIR



Source: Skidmore, Owings & Merrill

EIP

Typical Office Tower Floor Plan Figure 4
Pacific Exchange EIR

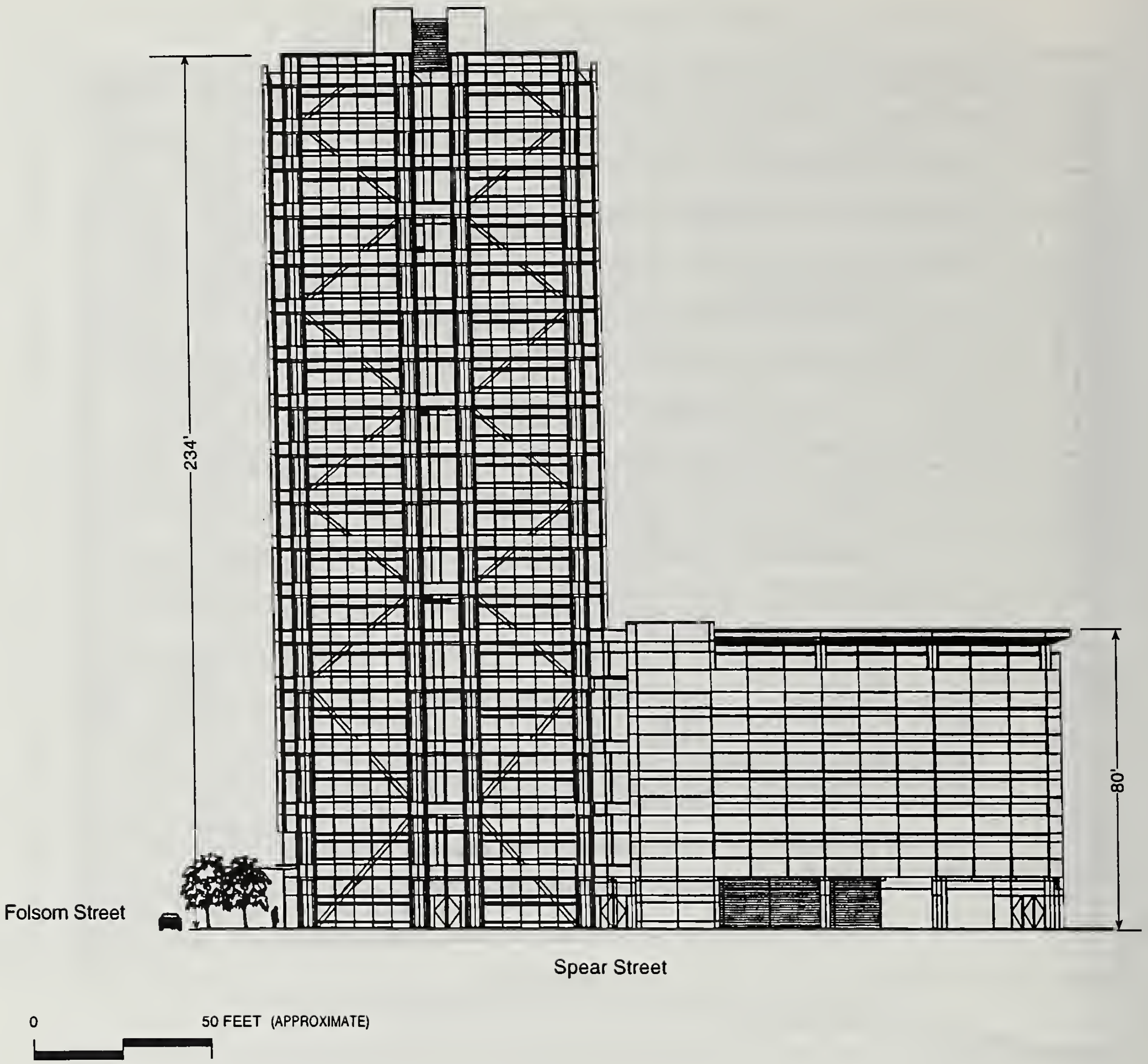


Source: Skidmore, Owings & Merrill

EIP

Folsom Street (South) Elevation Figure 5

Pacific Exchange EIR

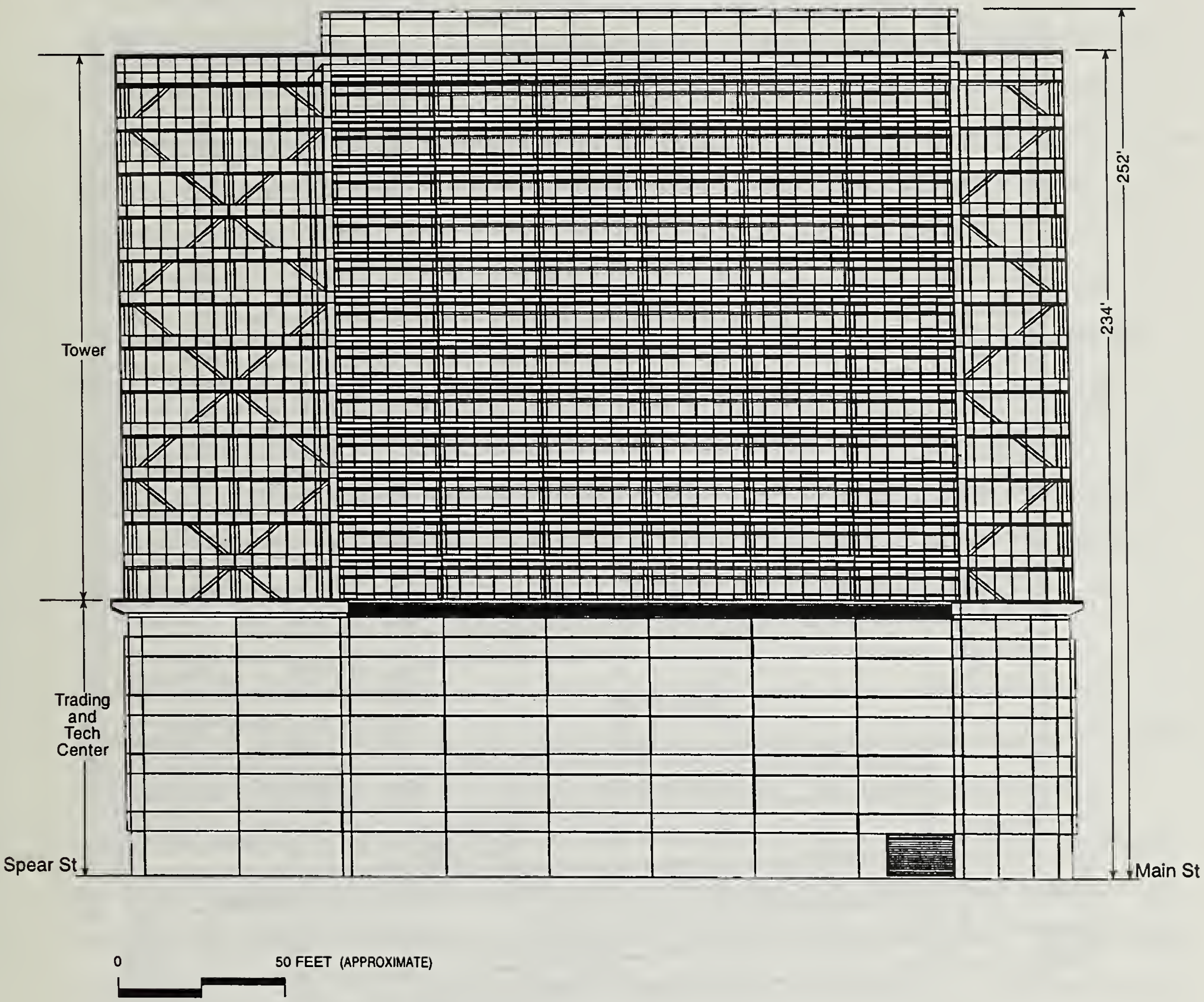


Source: Skidmore, Owings & Merrill

EIP

Spear Street (East) Elevation Figure 6

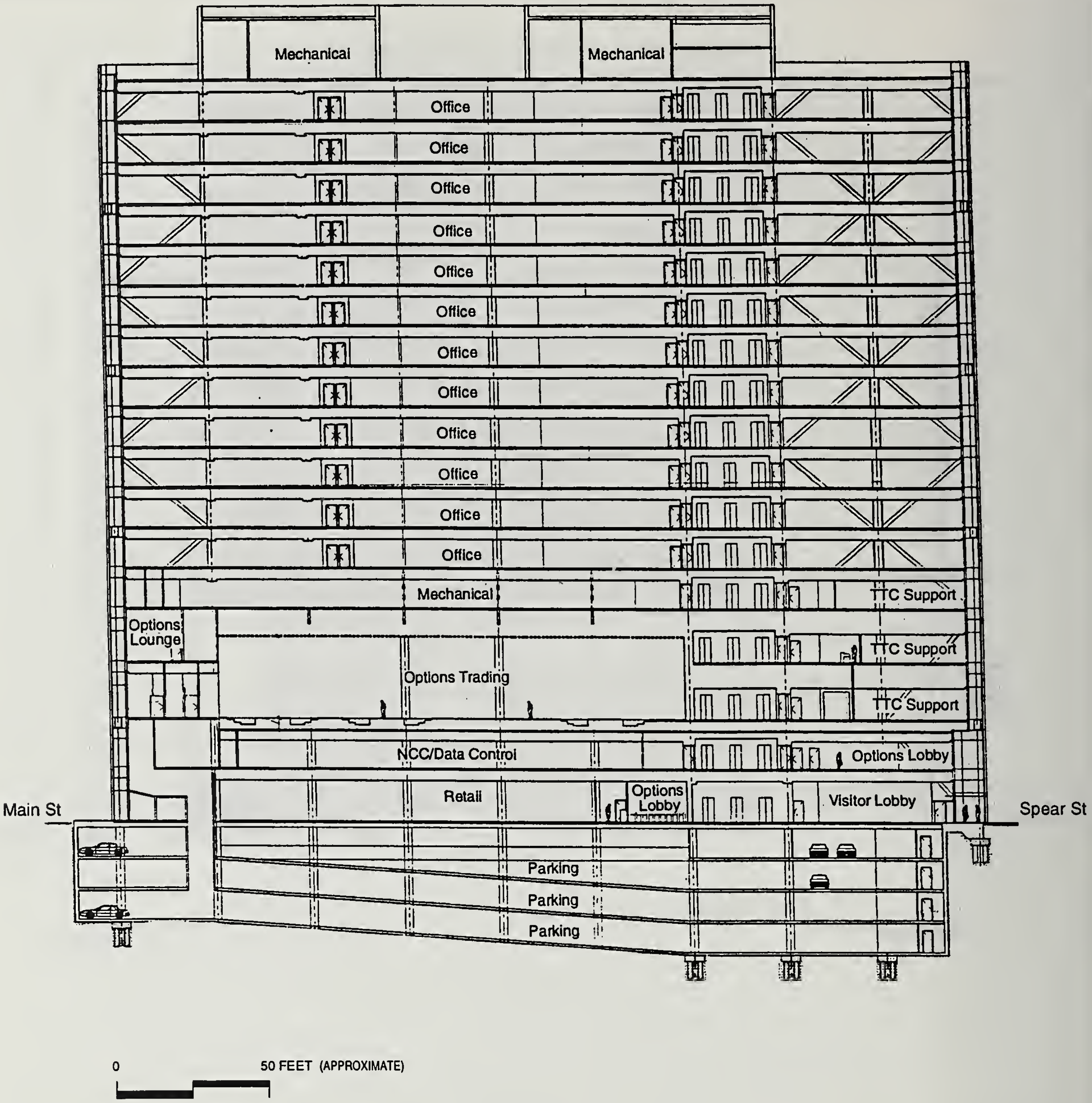
Pacific Exchange EIR



Source: Skidmore, Owings & Merrill

EIP

Inner Block (North) Elevation Figure 7
Pacific Exchange EIR



Source: Skidmore, Owings & Merrill

EIP

East–West Section Figure 8

Pacific Exchange EIR

The main pedestrian entrance and lobby for the building would front Folsom Street at the southeast corner of the site. The ground floor would contain about 8,400 gross square feet of retail space fronting Folsom Street (intended to meet convenience and service needs of area workers and residents), and support services for the Exchange. Three full-size off-street loading spaces are proposed, with access from Main Street. Access to the garage would be from Spear Street (see Figure 2).

To meet the needs of the Exchange, the Facility would include a square, thirty-thousand-square foot, column-free options trading floor with a 40-foot ceiling. The options and equities trading floors would be readily accessible for trading support and regulatory surveillance functions. The high trading floor occupancy requires over-sized exit corridors and stairways. To minimize time away from the trading floors, convenience and comfort facilities such as restrooms would accommodate maximum potential demand.

The project would be designed as an "essential facility," with higher structural design standards for seismic safety than for other buildings. These standards are similar to those for critical public buildings, such as hospitals and fire stations. The project includes these standards because the Securities and Exchange Commission requires that trading operations be fully functional immediately following a major earthquake or other disaster. The project structure (including utilities) would be designed to survive a major earthquake, and continue operations following such an earthquake or other disaster. For example, the project would include self-supporting back-up power including emergency generators, fuel storage tanks, batteries and an uninterrupted power source (UPS) system. The project would also include a water storage tank to provide water for consumption, restroom use and equipment cooling for at least three days.

According to the Exchange, both the overall size and the width of the project site are the minimum required to meet its programmatic needs. The Exchange believes the rectangular design of both the Trading and Technology Center (floors one to five) and the tower above it (floors 6 to 17) is necessary to provide a cost-effective essential structure.

The project design includes diagonal bracing, visible through the glass at the corners of the tower, which is intended by the architect to express the structural integration of the tower and base elements as well as reflect of the character of the building, and to make reference to the historic industrial character of the area and the diagonal elements of the Bay Bridge towers visible to the east. The middle portion of the tower would project out five feet from the facade on the north and south sides to accommodate the space needs of the Trading and Technology Center. The building would have a light green transparent glass curtain wall with silver-painted aluminum mullions and extrusions. The building entrance would be a raised plaza along Folsom Street, under a large canopy with smaller glass canopies to shelter entrances to retail spaces. The double-height lobby at Folsom and Spear would have a public area for displays, and would provide access to the fourth-level Visitors Gallery. Street trees on the site would be removed for the project. New trees would line a widened 25-foot sidewalk on Folsom Street.

The project architects are Skidmore, Owings & Merrill, of San Francisco.

D. PROJECT SCHEDULE, COST, APPROVALS, AND GENERAL PLAN POLICIES

PROJECT SCHEDULE AND COST

The project sponsors expect environmental review, project review, and detailed design to be completed by early 1999. If the project were approved and building permits issued, project construction is anticipated to commence in mid-1999 and last about 31 months. Initial occupancy would occur in 2001. Space not occupied initially by Exchange-related businesses would be occupied by short-term lease tenants, who would be replaced by Exchange-related firms as the Exchange grows. The estimated construction cost for the core and shell (excluding interior finishing) would be about $65,000,000 (1998 dollars), including excavation and construction of the parking garage. Completion of the Trading and Technology Center including the installation of necessary technology, and other interior finishing of the building, would be about $85,000,000.

APPROVAL REQUIREMENTS

Following a public hearing on the Draft EIR before the Planning and Redevelopment Agency Commissions, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the Planning Commission and the Redevelopment Agency Commission for certification as to its accuracy, objectivity, and completeness. No permits may be issued before the Final EIR is certified.

The project would require amendment of the *Downtown Plan*, an Area Plan of the *San Francisco General Plan*, to designate the project site C-3-0 (SD) (Downtown Office, Special Development), and include the project site within a 250-S Height and Bulk District.

The project would also require amendment of the *Rincon Point-South Beach Redevelopment Plan* to enable the SFRA to use redevelopment powers to remedy blight that now characterizes the site and facilitate development of the project, if the Redevelopment Agency deems such use necessary and desirable, and to establish land use standards to regulate and control development of the project. Amendment of the *Rincon Point-South Beach Redevelopment Project Area Design for Development*, the implementing mechanism for the Redevelopment Plan, would also be required to establish design objectives, standards, and guidelines to regulate and control development of the project.

The project would have a base height of 83 feet 10 inches; overall height of 234 feet 10 inches; maximum plan dimension length above the base of 275 feet and maximum diagonal dimension above the base of 286 feet; and maximum floor area size above the base of 23,750 square feet. As defined by the City Planning Code, the project floor area ratio (FAR) would be about 7.8 to 1, excluding the Parking Garage. It is anticipated that the amendments to the Design for Development will designate a maximum base height of 85 feet; maximum building height of 240 feet; maximum plan dimension length above the base of 275 feet and a maximum diagonal dimension above the base of 290 feet; and a maximum floor area size above the base of 24,000 square feet, to accommodate the project.

On December 18, 1997, the Planning Commission amended the Rincon Point-South Beach Project Area Preliminary Plan to include the project site and to enable the City of San Francisco and the SFRA to consider the appropriateness of the above-described actions. This is a preliminary step in the evaluation process and is not itself an approval of the amendments proposed as part of the project.

In addition, the project would require execution of an Owner Participation Agreement or Disposition and Development Agreement, or both, between the SFRA and the Exchange. This agreement would allow and govern physical construction of the project, and establish and govern the relationship between the SFRA and the Exchange regarding acquisition, ownership, consolidation, and potential (vertical) subdivision of the project site, and the financing, construction, ownership, and operation of the project improvements. There could be a separate purchase and sale agreement relating to the City-owned portion of the site between the City and the Exchange or between the City and the SFRA.

The following specific actions will be necessary to adopt and implement the project:

Redevelopment Agency Commission:

- Jointly certifies the Final EIR with the City Planning Commission.
- Adopts CEQA findings and mitigation monitoring program.
- Approves amendment(s) to the Rincon Point/South Beach Redevelopment Plan and recommends adoption to the Board of Supervisors.
- Adopts amendment(s) to the Design for Development.
- Approves Owner Participation Agreements, Disposition and Development Agreements, and related documents for the Pacific Exchange Site.

Planning Commission:

- Jointly certifies the Final EIR with the Redevelopment Agency Commission.
- Adopts CEQA findings and mitigation monitoring program.
- Adopts, and recommends to the Board of Supervisors, General Plan amendments, including amendment of the Downtown Plan of the General Plan to change designation of the project site from C-3-S (Downtown Support) and P(Public) to a C-3-O (SD) (Downtown Office [Special Development]) Use district, and the Height and Bulk district from 200-S to 250-S.
- Approves, and recommends to the Board of Supervisors, amendment of the City Planning Code and Zoning Map as necessary.

- Determines consistency with the General Plan and Planning Code Section 101.1 Priority Policies of the amendment(s) with the Redevelopment Plan, and other approvals, and recommends adoption to the Board of Supervisors.

Board of Supervisors:

- Adopts CEQA findings and mitigation monitoring program.
- Adopts General Plan amendments, including amendment of the Downtown Plan of the General Plan to change designation of the project site from C-3-S (Downtown Support, and P (Public) to a C-3-O (SD) (Downtown Office [Special Development]) use district, and change the proposed Height and Bulk district from 200-S to 250-S.
- Adopts amendments to the Rincon Point/South Beach Redevelopment Plan.
- Adopts amendments of the City Planning Code and Zoning Map, as necessary.
- Makes General Plan consistency findings.
- Approves any conveyance of interest in the City-owned parcel, Lot 27, to the Exchange, or to the SFRA for conveyance to the Exchange.

Department of Public Works:

- Permits and accepts street improvements.
- Approves design of public infrastructure improvements, including dimensions and grades of all public streets, such as the configuration of Folsom Street (widened sidewalk) on the project block.
- Approves site mitigation plan per Article 20 of the San Francisco Public Works Code regarding hazards
- Approves vertical subdivision of the site.

Department of Parking and Traffic or the Parking Authority:

- Approves agreements and permits to implement and operate the proposed public parking facility.

Department of Building Inspection:

- Issues demolition, site, building, and fire safety permits.

Department of Public Health:

- Implements the site mitigation plan requirements of San Francisco Public Works Code Article 20 (Maher Ordinance) related to hazards.

Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which established eight Priority Planning Policies. The policies, contained in Section 101.1 of the City Planning Code, are: 1) preservation and enhancement of neighborhood-serving retail uses; 2) protection of neighborhood character; 3) preservation and enhancement of affordable housing; 4) discouragement of commuter automobiles; 5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; 6) earthquake preparedness; 7) landmark and historic building preservation; and 8) protection of open space. Before issuing a permit for any project or adopting any legislation that requires an Initial Study under the California Environmental Quality Act, or adopting any zoning ordinance or development agreement, and before taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project, legislation, or action is consistent with the Priority Policies.

As noted above, the project would be reviewed by the Planning Department, the Planning Commission, and the Board of Supervisors in the context of applicable objectives and policies of the *San Francisco General Plan.* Some key objectives and policies are noted here.

Commerce and Industry Element

Objective 1 states "manage economic growth and change to ensure enhancement of the total city."

Objective 2 encourages development to "maintain and enhance a sound and diverse economic base and fiscal structure for the City."

Downtown Plan

Objective 2 encourages development in the Downtown to "maintain and improve San Francisco's position as a prime location for financial and administrative, corporate and professional activity."

Objective 2, Policy 1 states: "encourage prime downtown office space to grow as long as undesirable consequences of such growth can be controlled."

Objective 2, Policy 2 states: "guide location of office development to maintain a compact downtown core and minimize displacement of other uses."

Objective 18, Policy 3, discourages provision of new long-term commuter parking spaces in and around downtown and states that replacement of long-term parking spaces lost in the downtown should occur in areas peripheral to the downtown commercial district.

Objective 20, Policy 2, seeks to organize and control traffic circulation in the downtown core by channeling vehicles into peripheral parking facilities.

Objective 20, Policy 7, encourages conversion of existing parking facilities to short-term use, rate structures which favor short-term parking, and states that additional short-term parking facilities should be located in the designated parking belt outside the downtown core.

Urban Design Element

Objective 1: "Emphasis of the characteristic pattern which gives to the City and its neighborhoods an image, a sense of purpose and a means of orientation."

Objective 3: "Moderation of major new development to complement the City pattern, the resources to be conserved, and the neighborhood environment."

Objective 3, Policy 1: "Promote harmony in the visual relationships and transitions between new and older buildings."

Downtown Plan (Urban Design objectives)

Objective 1: "Create an urban form for the downtown that enhances San Francisco's stature as one of the world's most visually attractive cities."

Objective 2: "Create and maintain a comfortable pedestrian environment."

Objective 3: "Create a building form that is visually interesting and harmonizes with surrounding buildings."

Objective 4: "Create and maintain attractive, interesting urban streetscapes."

Transportation Element

Objective 1, Policy 7, "seek means to reduce peak travel demand."

NOTES: Project Description

1. Clearing firms are member firms or brokerages that "clear" or settle accounts for securities trades by other parties.

III. ENVIRONMENTAL SETTING AND IMPACTS

An application for environmental evaluation for the Pacific Exchange project was filed March 6, 1998. On the basis of an Initial Study published on May 30, 1998, the San Francisco Planning Department and the Redevelopment Agency determined that an EIR was required. The Initial Study determined that the following effects of the project would either be insignificant or would be reduced to a less than significant level by mitigation measures included in the project and thus required no further analysis: land use; visual quality; population; employment and housing; noise; utilities and public services; biology; geology and topology; water; energy and natural resources; hazards; and cultural resources. Therefore, the EIR does not discuss these issues. As noted, Initial Study found that land use and visual quality would not cause potential significant environmental effects and required no further analysis and noted that those topics would be included in the EIR for informational purposes, to orient the reader. (See Appendix A, p. A.1, for the Initial Study.) Not all impacts presented in this chapter are significant physical environmental effects as defined by CEQA. Non-physical effects are included here, for informational purposes.

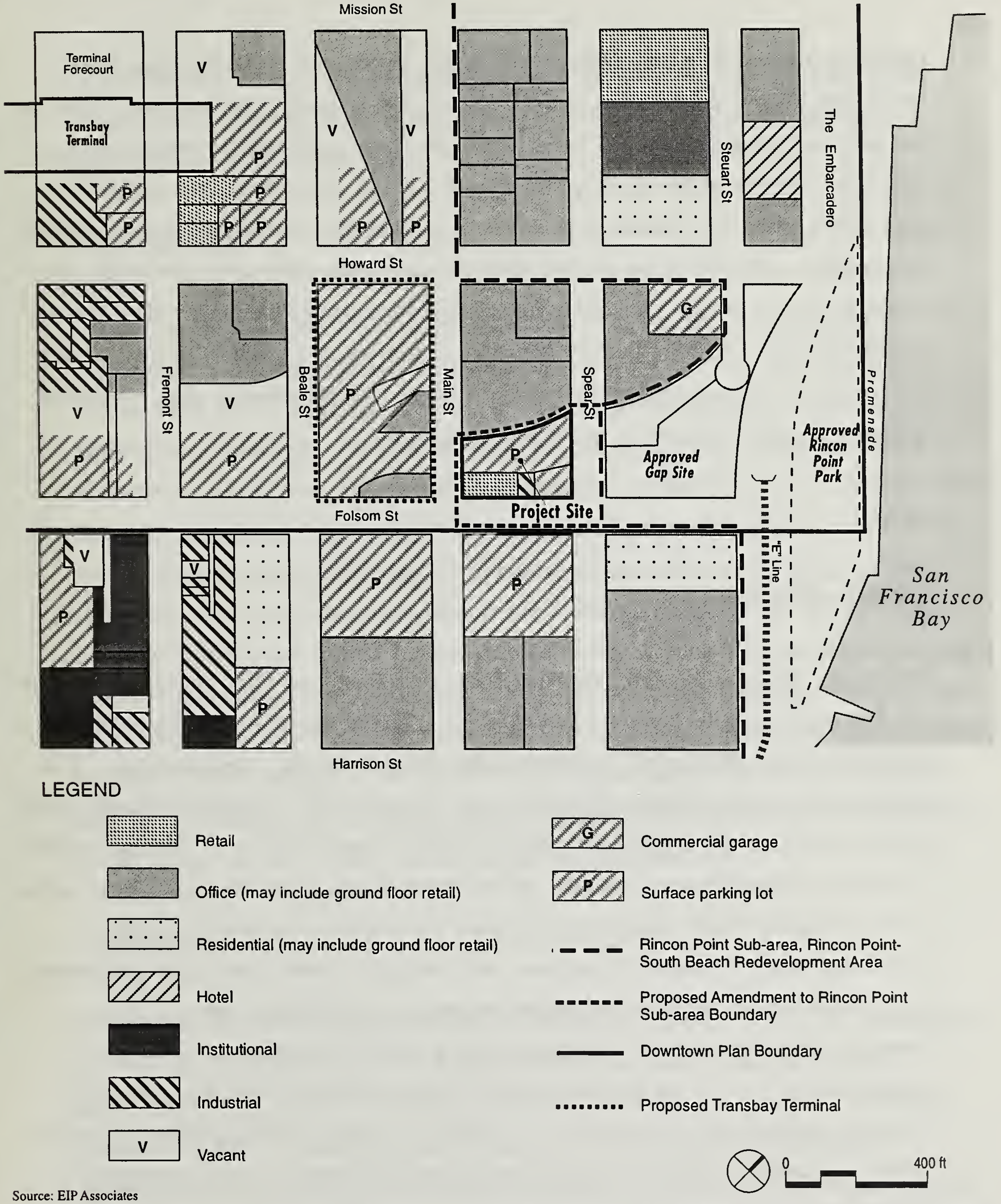
A. LAND USE, PLANS AND ZONING

SETTING

LAND USE

The project site occupies the southern portion of the block bounded by Howard Street on the north, Folsom Street on the south, Main Street on the west, and Spear Street on the east (see Figure 1, p. 17).[1] The site includes Lots 27, 29, 30, 31, and 32 of Assessor's Block 3740 and is approximately 54,000 square feet. Lot 27 contained a section of the Embarcadero Freeway until its demolition after the 1989 Loma Prieta earthquake. The California Department of Transportation (Caltrans) right-of-way was transferred to the City. The lot is now owned by the City and is administered by the San Francisco Department of Real Estate; it is currently leased as a surface parking lot containing about 200 spaces. The remaining lots are privately owned and would be acquired by the Exchange or Redevelopment Agency. Lots 31 and 32 (a very small lot) contain about 65 spaces of surface parking. Lots 29 and 30 together contain two adjacent, 15-foot-tall commercial structures that occupy about 12,000 square feet of the site. The building at 160 Folsom Street (Lot 30) is in retail use occupied by Books Inc. Outlet. The structure at 126 Folsom Street (Lot 29) is a warehouse. These buildings would be demolished and the existing surface parking lots would be eliminated as part of the proposed project. Structures occupying the rest of the project block include the 250-foot-tall, 17-story office building at 211 Main Street; the five-story building at 101 Howard Street at the corner of Spear (the former Folger's Coffee building); and the 230-foot-tall, 16-story 221 Main Street office building, with street-level retail uses and day care uses adjacent to the project site.

The project site is in a part of the South of Market area of San Francisco, a transition area from high-intensity office use on the north to an area of predominantly mixed, low-rise commercial and industrial uses, residential development, and surface parking on the south (see Figure 9). Generally, buildings north of the project site, near Market Street, are taller than newer development south of Mission Street (generally reflecting height limits in place at the time of development). Land use north of the project site is characterized primarily by a concentration of high-rise office towers. Of these towers, most are 15 stories or taller and contain ground-floor retail uses. These high-rise office buildings in the vicinity of the project site include those on the project block, noted above, and 123 Mission Street, 201 Mission Street, 100 Spear Street, and 150 Spear Street, all to the north. Rincon Center (including the former Rincon Annex Post Office, City Landmark No. 104) is a mixed-use retail, office, and residential development on the Mission, Spear, Steuart, and Howard Streets block to the northeast. Land use to the east of the project includes surface parking (on former Embarcadero Freeway land) and The Embarcadero roadway. The approved 16-story Gap building will be constructed across Spear Street from the project site, partially on former freeway lands. As part of that development, the Gap will develop and maintain Rincon Point Park, a three-acre open space between Howard and Harrison Streets at The Embarcadero (see Figure 9). South of the project site there are a variety of land uses:



Source: EIP Associates

Existing Land Use and Plan Areas in Project Vicinity Figure 9
Pacific Exchange EIR

Caltrans and privately owned buildings and surface parking used by Golden Gate Transit; mixed-used commercial structures, typically four stories or fewer to the south and west. To the southwest is a seven-story US Postal Service Building with associated surface parking; Hills Plaza, which includes 18-story towers up to 220-feet tall (including the former Hills Bros. Coffee plant, City Landmark No. 157), is a residential, retail, commercial, and office development, with below-grade parking and a day-care center southeast of the project site. To the west of the project site, land use previously dominated by the Embarcadero Freeway and opened up as a result of freeway demolition is now vacant or used for surface parking and remains in Caltrans ownership. Structures in this area are primarily older commercial buildings, typically from one to six stories in height.

PLANS

The Downtown Plan

The project site is located within the boundaries of the *Downtown Plan*, an Area Plan of the *San Francisco General Plan* (see Figure 9, p. 36). The *Downtown Plan* is the policy document which guides growth and development in San Francisco's downtown area. It is implemented by corresponding ordinances in the Planning Code. Centered on Market Street, the plan covers an area roughly bounded by Van Ness Avenue to the west, The Embarcadero to the east, Folsom Street to the south, and the northern edge of the Financial District to the north. The plan contains objectives and policies which address the following issues: provision of space for commerce, housing, and open space; preservation of the past; urban form; and movement to, from, and within the downtown area (transportation). The Downtown Plan was intended to manage growth in this area, including maintaining a compact downtown core and directing growth to areas with developable space and easy transit accessibility so downtown would "encompass a compact mix of activities, historical values, and distinctive architecture and urban forms that engender a special excitement reflective of a world city" (Downtown Plan, p. II.1.1). The Downtown Plan limits growth in the traditional downtown, centered in the Financial District, by adjusted height limits and

FAR (floor-area ratios). The plan identified South of Market areas, particularly in the vicinity of the Transbay Terminal (the C-3-O (SD)-Special Development) district to encourage new office development.

Rincon Hill Plan

The *Rincon Hill Plan*, an Area Plan of the General Plan, was created to encourage development of housing and commercial/industrial uses in a 12-block area bounded by Folsom Street on the north, Essex Street on the west, the Bay Bridge on the south, and The Embarcadero on the east. A portion of this area is proposed to be included within the Transbay Area Plan Area. The project site, located on the north side of Folsom Street, abuts the northern border of the Rincon Hill Plan area which includes the south side of Folsom Street. While provision of housing is a primary goal of the Rincon Hill Plan, the plan (Objective 3) also recognizes the need to preserve existing industrial, service, and office uses, and to create such uses in designated areas. The plan calls for conversion of existing structures, especially vacant warehouses, to new uses, including residential 'loft' space and mixed commercial activities. The *Rincon Hill Plan* includes a land use plan which designates two basic land use categories, residential and commercial/industrial. The block directly across Folsom Street from the project site is designated residential, and the block southwest across Folsom and Main Streets is designated commercial/industrial.

Transbay Area Plan

The 1989 Loma Prieta earthquake resulted in damage to and demolition of the Embarcadero Freeway and Terminal Separator, opening up substantial tracts of land for potential development in the vicinity of the project site. To date, most affected parcels remain in Caltrans ownership. Planning efforts are underway to reconfigure the transportation infrastructure in the area, which includes the damaged Transbay Terminal building at First and Mission Streets. In 1995, the City began developing a Transbay Area Plan that would include the project site and vicinity. The planning process was reevaluated in late 1997/early

1998 and plan parameters are being reconsidered. The Transbay Area planning efforts will consist of adoption and implementation by the City and County of San Francisco of the Transbay Area Plan, an Area Plan of the General Plan, and related Planning Code amendments for an approximately 190-acre area of greater downtown San Francisco, generally bounded by Market Street on the north, Spear Street on the east, Harrison and Bryant Streets on the south, and Second and Third Streets (Yerba Buena Center), on the west. The designation of a Redevelopment Project Area is an implementation mechanism under consideration.

Draft General Plan amendments and Planning Code amendments include objectives and policies to guide development throughout the plan area, and a Land Use Map to assist in the development of transportation improvements, open space, parking, mixed-use development, affordable housing, and rehabilitation of unreinforced masonry buildings of architectural merit.

Generally, the draft changes to existing development regulations are not now envisioned to result in extensive changes in current zoning controls. Building heights, and overall intensity of development permitted in the project area are expected to be generally similar to what is allowed today. Uses envisioned for the area include mixed use, high-rise office, commercial, institutional, educational, entertainment, and residential uses. The Trading and Technology Center, office tower, public parking garage, and ground floor retail uses in the proposed project would be generally consistent with the mix of uses in the proposed plan.

In March 1996, the Board of Supervisors and the Mayor recommended for further study a site for a new terminal to replace the Transbay Terminal, in the block bounded by Howard, Main, Beale, and Folsom Streets, directly across from the Exchange project site (see Figure 9, p. 36). This site is being considered, together with the existing Transbay Terminal site, in ongoing analyses by the City and MTC.

Draft plans for the Transbay Area include Folsom Boulevard, which is envisioned as a pedestrian-oriented boulevard, including improvements to Folsom Street from The Embarcadero to Second Street; sidewalks would be widened to accommodate pedestrian flow, street trees, and amenities such as sidewalk cafes. Folsom Boulevard is also intended to improve vehicular movement, especially between the Bay Bridge and the rest of the City, with proposed street and directional modifications.

Rincon Point-South Beach Redevelopment Plan

The *Rincon Point-South Beach Redevelopment Plan Area* comprises 115 acres in two non-contiguous portions located along the waterfront between Mission Street and China Basin (see Figure 9, p. 36). The Redevelopment Agency and the City and County of San Francisco adopted the Rincon Point-South Beach Plan as a means of providing economic revitalization and physical renewal in an area of the City that had become underutilized and blighted as a result of declining demand for maritime-related uses. The Redevelopment Plan document characterized "an extensive amount of vacant or underutilized land, ...parcels of irregular form and shape and inadequate size for proper usefulness and development, and a substantial number of buildings and piers which are deteriorating, dilapidated, or of obsolete design." (Rincon Point-South Beach Redevelopment Plan, p. 5). For the Rincon Point sub-area, adjacent to the project site to the east, the Plan indicates land uses that include residential, commercial, and office development. Under the Redevelopment Plan, the area directly to the east of the project site (that is, east of Spear Street) is to be developed as office space for the Gap, with a height limit of 240 feet, with a portion of the building rising to 287 feet.

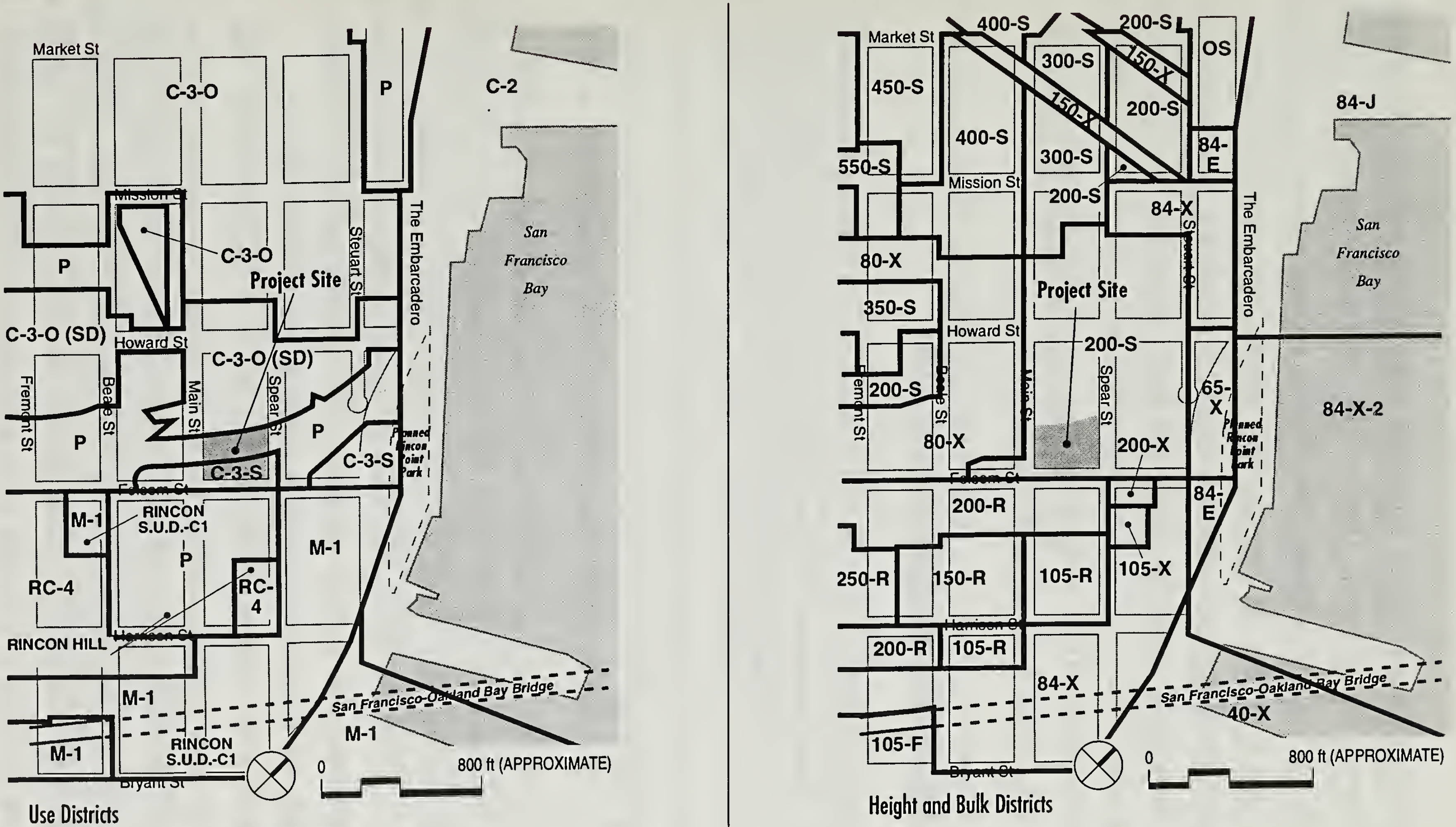
ZONING

The proposed project would include amendment of the Rincon Point-South Beach Redevelopment Plan, to include the project site in the Rincon Point-South Beach Redevelopment Area. The project would then be subject to the policies and development controls set forth in the Rincon Point-South Beach Redevelopment Plan and Design for

Development document, rather than the provisions of the San Francisco Planning Code, except to the extent the latter may be incorporated by reference into the Redevelopment Plan and the Design for Development document.

On the site, Lot 27 is currently within a P (Public) district; the remaining lots are in a C-3-S (Downtown Support) District. The entire site is in a 200-S Height and Bulk District. The remainder of the block is zoned within a as C-3-O (SD) (Downtown Office, Special Development Use District), and a 200-S Height and Bulk District (see Figure 10). The City Planning Code provides the following description of C-3-S Districts: "This district accommodates near the intensive downtown core areas important supporting functions such as wholesaling, printing, building services, secondary office space and parking....The district has for the most part been underdeveloped in the past, and opportunities exist for major developments of new uses covering substantial areas" (Section 210.3). The 200-S Height and Bulk District limits buildings to 200 feet. In general, as set forth in Section 270(d), the 'S' Bulk designation provides dimensional requirements for buildings which are intended to reduce bulk with increased height.

The City Planning Code describes the C-3-O (SD) use districts' purpose: "to provide for an orderly expansion of the financial district in a way that will maintain a compact downtown core, as well as create a receiver area for Transfer of Development Rights (TDR) for preservation purposes." (Section 24B(a)) The project, The Trading and Technology Center, the office tower, associated ground floor retail, and the public parking garage, would be principal permitted uses in both C-3-S and C-3-O (SD) districts. The 250-S Height and Bulk District, as specified in the City Planning Code, requires reduced bulk with increased height. The proposed project, at 234 feet, would conform with the proposed 250-foot height district. If the project were to proceed under City Planning Code controls, the project would require exceptions to bulk limitations as provided in Section 270 and, in C-3 districts, under City Planning Code Section 309.



Use Districts

C-2	Community Business
C-3-O	Downtown Office
C-3-O (SD)	Downtown Office (Special Development District)
C-3-S	Downtown Support
RC-4	Residential/Commercial Combined Districts (High Density)
M-1	Light Industrial
P	Public Use

Height and Bulk Districts

OS	Open Space District
00-Z-1	Numbers are height limits in feet; letter symbols refer to bulk limits in City Planning Code Sec. 270; suffix numbers identify districts in which special regulations apply. See City Planning Code Secs.

Source: San Francisco Planning Department

EIP

Existing Planning Code Use Districts and Existing Planning Code Height and Bulk Districts Figure 10

Pacific Exchange EIR

Projects under Redevelopment Agency jurisdiction do not require approval under Section 321 [Office Development: Annual Limit]. However, the office space constructed as a result of the proposed project would be subtracted from the City's annual approval limit, currently 950,000 square feet per year. The Planning Code includes requirements for downtown projects related to provision of open space (Section 139); support for the Downtown Parks Special Fund (Section 149); provision of public art in the project (Section 149); contribution to affordable housing (Section 313); and provision of child-care (Section 314). While not required in Redevelopment Areas, such linkage Requirements could be imposed in the Rincon Point-South Beach Redevelopment Area (see p. 46).

COMPARISON WITH THE EXISTING PLANS

In the Initial Study, published May 30, 1998 (Appendix A), the Planning Department and Redevelopment Agency determined that the project would not have a substantial adverse effect on land use. The following discussion is included for informational purposes, to orient the reader.

PROPOSED LAND USE

The project would change land use at the project site from surface parking, small-scale retail, and warehouse to a new facility for the Pacific Exchange, members, and other associated firms and project-serving retail use, as well as a parking garage. As discussed in the Setting subsection, p. 35, the project area is transitional in character, with the northern half of the project block developed with high-rise office uses. The southern portion of the project block, the project site, is less developed and has more in common with the mixed commercial nature of the South of Market area than the rest of the project block. The proposed project would complete conversion of the project block to high-rise office use. The proposed project uses would reinforce the project block's links to the downtown Financial District, extending this district to encompass the southern part of this South of Market block. The Hills Brothers development has, and the approved Gap office building will, similarly historically North of Market uses into the South of Market area. It is possible that the relocation of the Pacific Exchange could signal a shift in the Financial District, San Francisco's traditional downtown core. Over time, businesses with activities related to those of the Exchange could occupy space in the vicinity of the project site, reducing the concentration of financial activities north of Market Street. Such a shift would reflect a changing geography of particular businesses, not a difference in the nature of land use within the Downtown core, which would be expected to remain office-based.

The Project in Relation to the Downtown Plan

The project would amend the *San Francisco General Plan* to redesignate the project site from its C-3-S and P Use districts to C-3-O (SD) (Downtown Office Special Development District) use district and a from a 200-S to a 250-S Height and Bulk District. C-3-O (SD) districts are shown in Map 1, on p. II.1.9 of the Downtown Plan. The C-3-O (SD) districts are differentiated from C-3-O districts in the Downtown Plan in that the base FAR in C-3-O (SD) is limited to 6:1, as opposed to 9:1 in C-3-O districts. The lower base FAR is intended to encourage the use of Transfer of Development Rights (TDR) from significant or contributory buildings as provided for in the Downtown Plan and as designated under Article 11 of the City Planning Code, and allow more intensive development in the Transbay Terminal area. Height and Bulk districts are shown in Map 5, on p. II.1.29 of the Downtown Plan. Existing (DTP) Height and Bulk districts are presented in Figure 10. Upon adoption of the proposed amendments, which would provide for the expansion of the C-3-0 (SD) District to encompass the entire project block, the project would generally be consistent with the Downtown Plan.

The Project in Relation to the Rincon Hill Plan

The Trading and Technology Center, office tower, public parking garage, and ground floor retail uses of the proposed project would be generally compatible with the mixed-uses permitted under the Rincon Hill Plan for those portions of the Rincon Hill Plan area in the vicinity of the project.

The Project in Relation to the Rincon Point-South Beach Redevelopment Plan

The Rincon Point - South Beach Redevelopment Plan contains general policies that guide land use in the Rincon Point - South Beach Redevelopment Area, while the Design for Development document includes more specific objectives and controls pertaining to development standards and design guidelines. The Rincon Point - South Beach Redevelopment Plan was approved by the Board of Supervisors in January 1981. The Redevelopment Plan has been amended, most recently in 1997 to accommodate the Giants Ballpark. The Rincon Point - South Beach Design for Development document was approved by the Redevelopment Commission and the Planning Commission in December 1980. The Design for Development document has also been amended, most recently in 1997 for the ballpark.

The project would amend the Rincon Point sub-area of the Rincon Point-South Beach Redevelopment Plan to include the project site (see Figure 9, p. 36). The proposed development would then be subject to policies and controls set forth in the *Rincon Point-South Beach Redevelopment Plan* and its Design for Development. The Redevelopment Agency and the City are currently drafting amendments to the *Rincon Point-South Beach Redevelopment Plan* and Design for Development document that would accommodate development of the Pacific Exchange project. For the necessary amendments to be adopted, they must first be found in conformity with the General Plan; this requirement generates amendments the Downtown Plan discussed above. On December 18, 1997, the Planning Commission amended the Rincon Point-South Beach Project Area (Northeastern Waterfront) Preliminary Plan to enable the City and the Redevelopment Agency to consider the appropriateness of the necessary amendments.

Along with development guidelines and controls, the *Rincon Point - South Beach Redevelopment Plan* for the Rincon Point Sub-Area requires the Agency to impose fees, conditions or exactions for office uses consistent with Planning Code Sections 139, 149, and 313. Thus, if the project site were added to the Rincon Point - South Beach Redevelopment

Plan Project Area as proposed, the project must contribute to the Downtown Parks Special Fund; provide art as part of the project equal 1% of construction costs; and participate in the Office - Affordable Housing Production Program by production of affordable housing or payment of an in-lieu fee. While not required, the Redevelopment Agency could impose other controls on the project including: provision of on-site open space similar to Section 138 of the City Planning Code and provision of child-care facilities similar to Section 314 of the City Planning Code.

NOTES: Land Use, Plans and Zoning

1. For ease of reading, Market Street and streets parallel to it are described as running east-west, and Spear Street and streets parallel to it are described as north-south streets, even though the south of Market Street grid is not exactly aligned north-south and east-west.

B. VISUAL QUALITY AND URBAN DESIGN

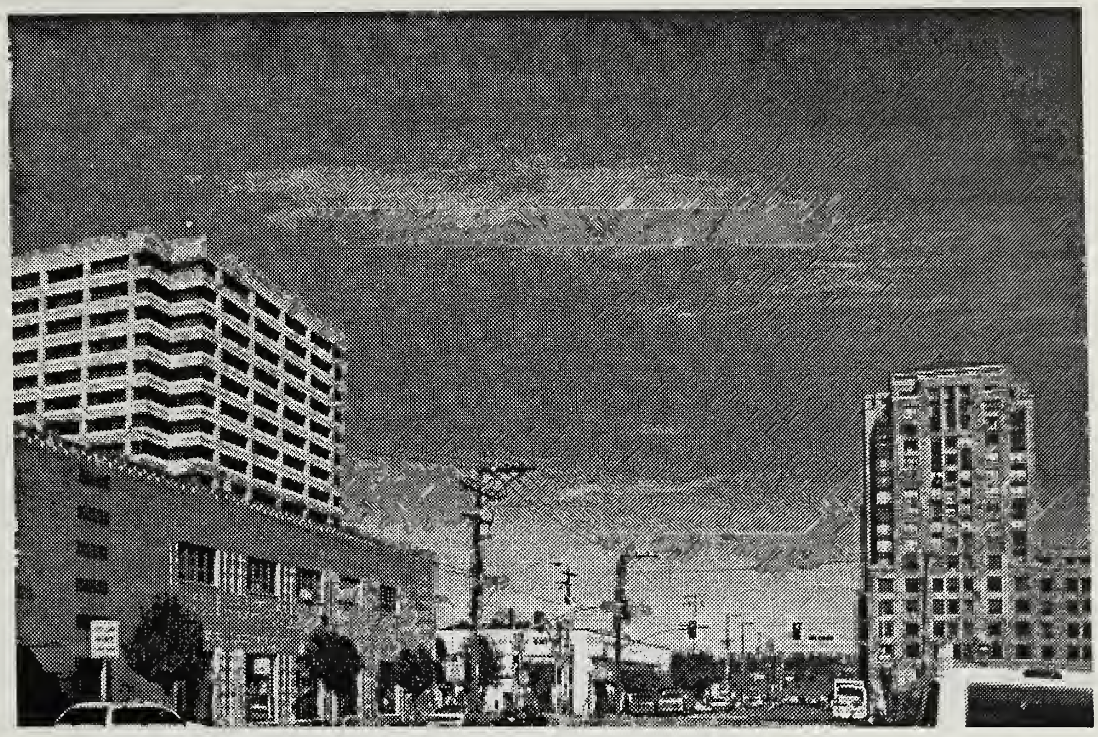
The Initial Study, published on May 30, 1998, determined that visual quality effects of the proposed project would not be significant (see Appendix A, p. A.13). However, existing visual quality and urban design conditions, and changes with the proposed project are included herein for informational purposes.

SETTING

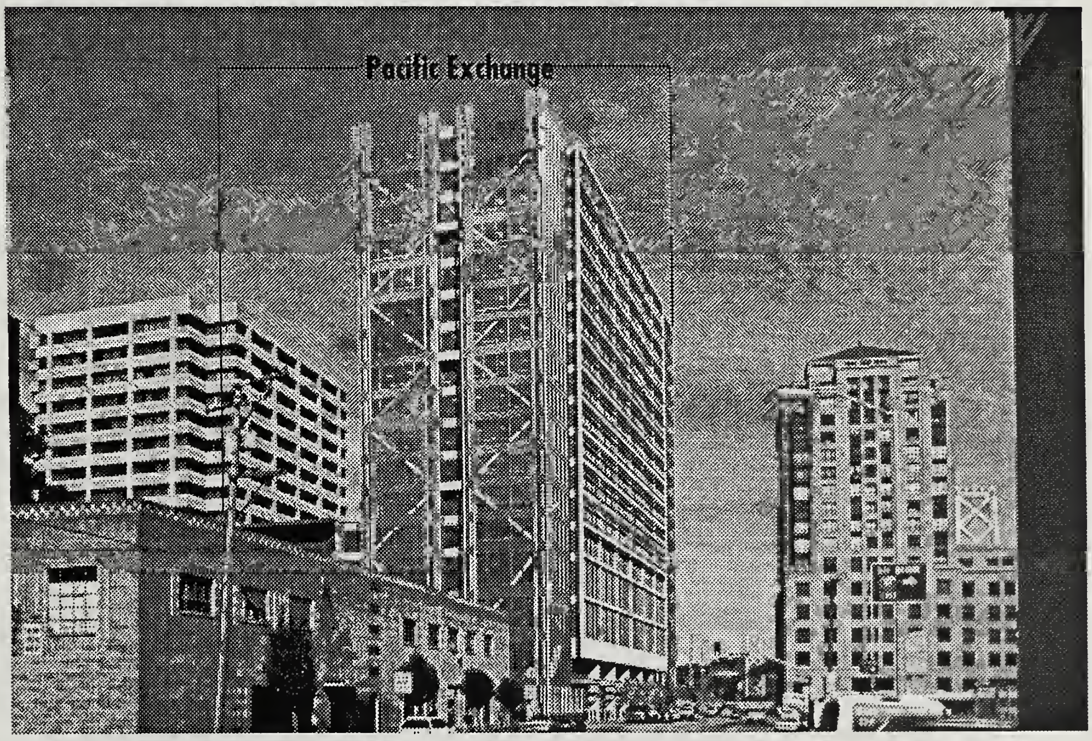
The project site contains two structures, one at 126 Folsom Street near Spear Street and the adjacent building at 160 Folsom Street at the corner of Main Street. Both are one- to two-story unembellished commercial buildings. The 126 Folsom building is of concrete block construction. The 160 Folsom building is of masonry construction with a stucco finish. Both structures were built in the 1950's, after development of the Embarcadero Freeway. Neither building is noted regarding architectural merit in Articles 10 or 11 of the Planning Code, the 1976 Planning Department Architectural Survey, or the Foundation for San Francisco Architectural Heritage, or in any state or federal register. The remainder of the site is used as surface parking, including land cleared during the demolition of the Embarcadero Freeway (see Figure 11.A).

The project vicinity is a mix of newer high-rise office and mixed-use retail-office-residential buildings rising up to 18 to 20 stories and to about 240 feet, north of the project site along Steuart Street, Spear Street and Main Street, and older industrial and warehouse structures and parking lots, generally south of Folsom Street, with buildings that range from one to about seven stories.

The Main Street - Spear Street corridor, to Folsom Street, is considered a southerly extension of downtown, with large-scale buildings south of Mission Street. These newer buildings on Main and Spear Streets may be set back from the street, typically with plazas and other publicly accessible open spaces. The 221 Main Street building, with a widened



A — Project Site



B — With Proposed Project

Source: Michael Sechman & Associates; Skidmore, Owings & Merrill

EIP ASSOCIATES

View Looking East from Folsom Street near Beale Street Figure 11

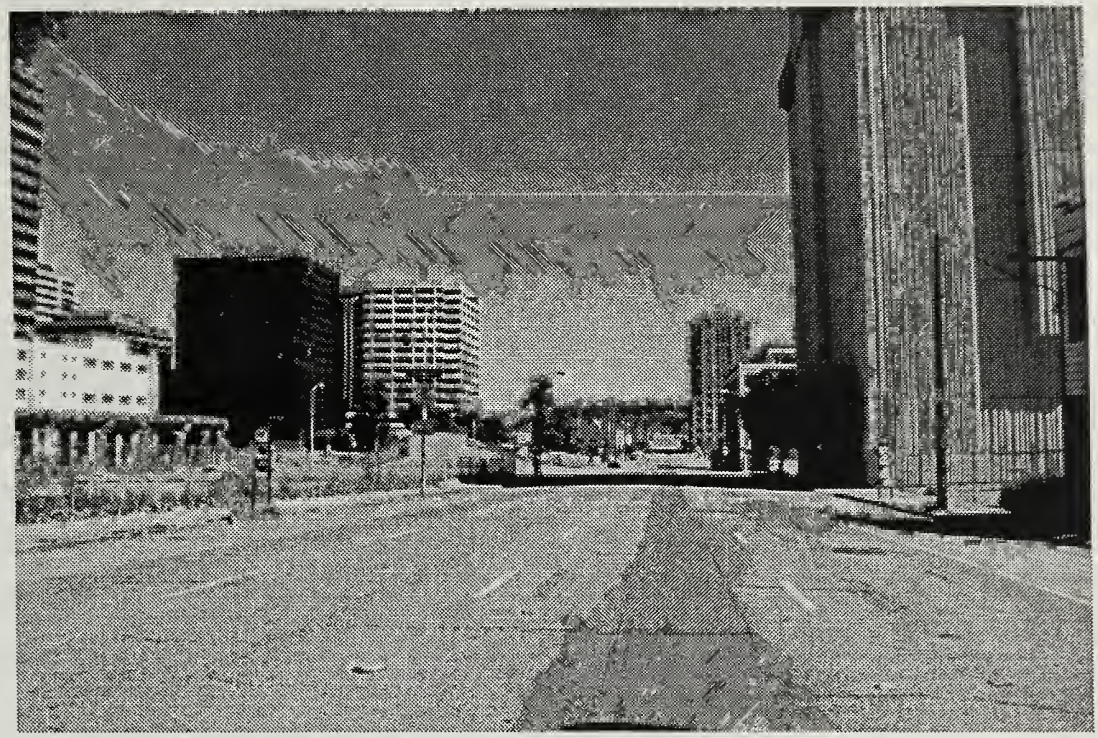
Pacific Exchange EIR

sidewalk, a plaza and pedestrian path between Spear and Main, is an example. In general, however, most buildings are built to lot lines and form a continuous urban street wall along Main and Spear Streets. The former Embarcadero Freeway corridor, other parking uses, and the low-rise character of many buildings south of Folsom Street contrast with the larger-scale development to the north.

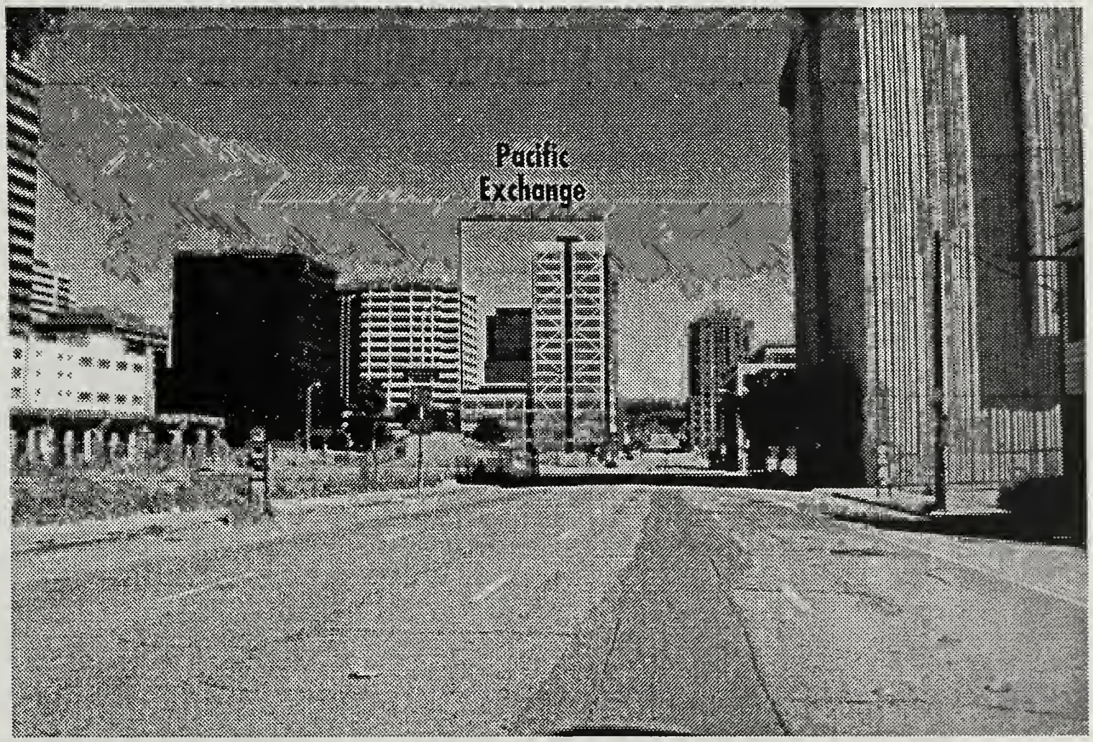
Existing buildings near the project site exhibit a variety of architectural styles and massing. In the immediate vicinity, 221 Main Street, adjacent to the site, is a 230-foot-tall, 16-story tower, set back on a podium, with concrete facade panels and horizontal window patterns. The 250-foot-tall, 17-story 211 Main Street building, at Howard Street, has glass curtain-walls, with dark metallic details. Figure 12A includes a view of these buildings. 201 Spear Street, at Howard, is a brick-clad bay-window 245-foot-tall, 18-story tower. The entire block southeast of the project site, bounded by Spear-Folsom-Embarcadero-Harrison Streets, is occupied by Hills Plaza, the renovated former Hills Bros. coffee plant and additions, with office, retail and residential uses. The Hills Plaza buildings include a mix of base elements and towers, up to 220 feet and 18 stories in height, clad in dark-brown brick. The US Postal Service and Caltrans buildings, up to seven stories in height with adjacent associated surface parking, occupy the southern half of the two blocks bounded by Folsom-Spear-Harrison-Beale Streets. They are concrete warehouse structures, dating to the 1940's, with large industrial windows.

The approved Gap building, east of the project site between Spear and The Embarcadero at Folsom, will be a 287-foot-tall, 16-story building with a series of setbacks and a lantern tower, with dark red and grey facade materials and recessed windows.

Open space in the area consists of privately owned, publicly accessible areas, including the widened sidewalk on the Main Street frontage of 221 Main Street, adjacent to the project site on the north; 221 Main Street also has a plaza seating area on its north side. The approved Gap headquarters building will include a plaza on its north side. The Gap project will also create Rincon Point Park, between The Embarcadero roadway, Herb Caen Way, and Howard



A — Project Site



B — With Proposed Project

Source: 3D Visions

EIP ASSOCIATES

View Looking East from Folsom Street near First Street Figure 12

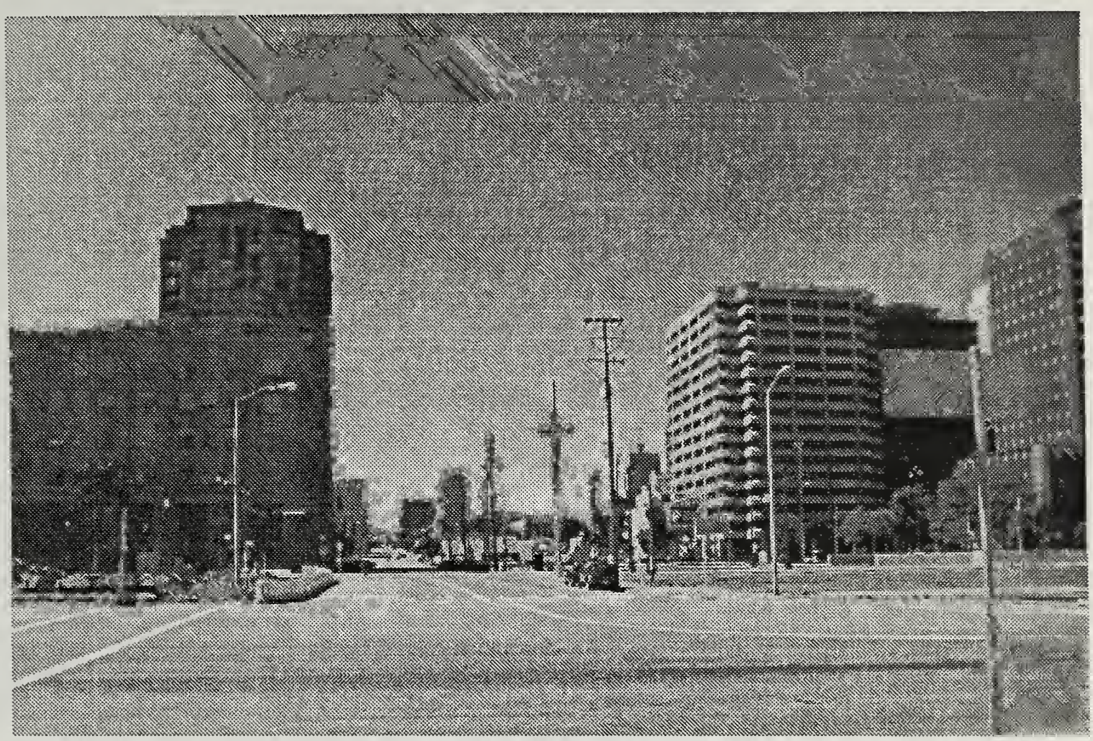
Pacific Exchange EIR

and Harrison Streets, on the waterfront. The site is generally visible from the immediate vicinity only, including the foot of Folsom Street at Herb Caen Way, from west of the site near Fremont Street, and from south of the site on Spear or Main. From the north, views of the site are limited because of intervening high-rise buildings.

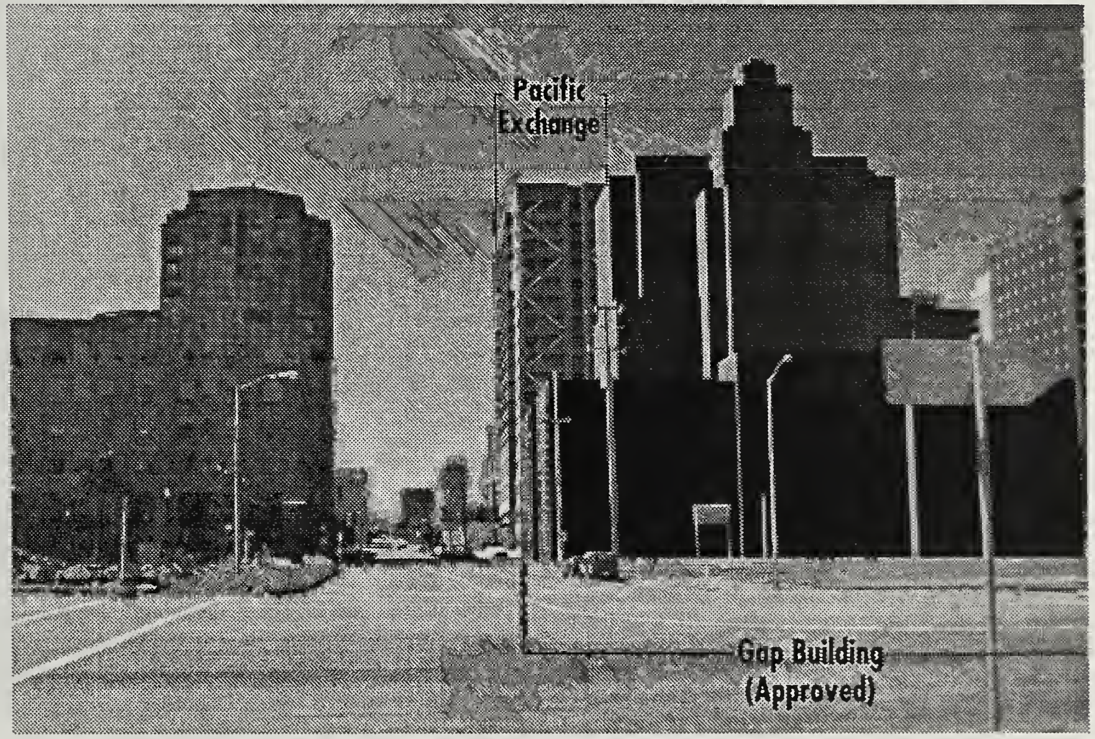
Along the north side of Folsom Street in the site vicinity, views of the now-demolished Embarcadero Freeway have been replaced by those of parking lots which now generally occupy those freeway parcels (see Figure 12.A). In mid-range views, the freeway demolition opened new views east on Folsom Street of the Bay, the Bay Bridge, and Yerba Buena Island. This view is repeated on parts of the south side of the street as well, where commercial and US Postal Service surface parking lots and a Golden Gate Transit bus layover lot between Spear and Beale Streets are dominant with occasional buildings, including the Folsom Street PG&E substation at Folsom and Fremont Streets. The recently remodeled loft buildings at 301 Folsom Street at Beale, Hills Plaza (City Landmark No. 157) at Folsom and Spear Streets, and the Klockars blacksmith shop at 449 Folsom (City Landmark No. 149) are visual landmarks in the area (see Figure 13.A). Views to the north from Spear Street include other South of Market office development, beyond the former freeway corridor (see Figure 14.A).

RELATIONSHIP TO PROPOSED PROJECT

The project would demolish the two existing buildings on the site and develop a 17-story, 234-foot-tall structure (252 feet to the top of the mechanical penthouse), with a five-story, 84-foot-tall base (the Trading and Technology Center) extending to the north. The 17-story building would include the full frontage of Folsom Street from Spear to Main Streets (see Figure 11.B). Floors 6 through 17 would be set back about 100 feet from the 221 Main Street building to the north. The base, which would cover virtually the entire site, would be set back up to about 15 feet to 20 feet from the 221 Main Street building (see Figure 12.B). The project would be built to the lot lines on Spear and Main Street. The Folsom Street frontage would be set back about 15 feet from the property line. (The existing sidewalk is



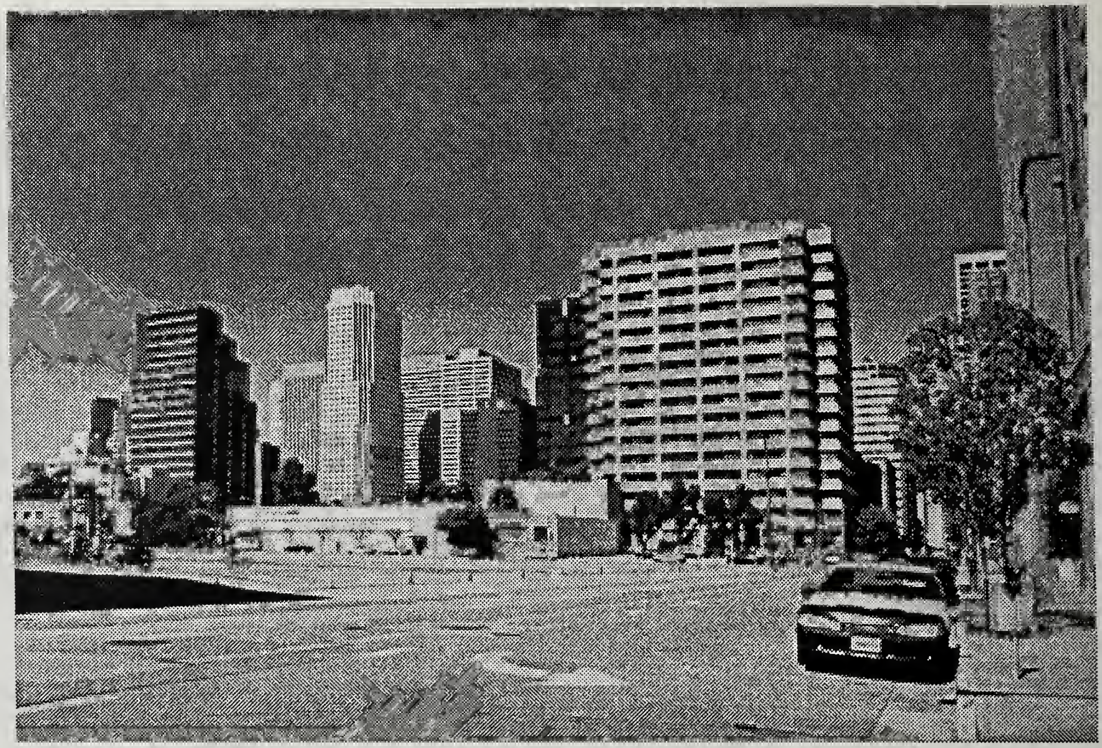
A — Project Site



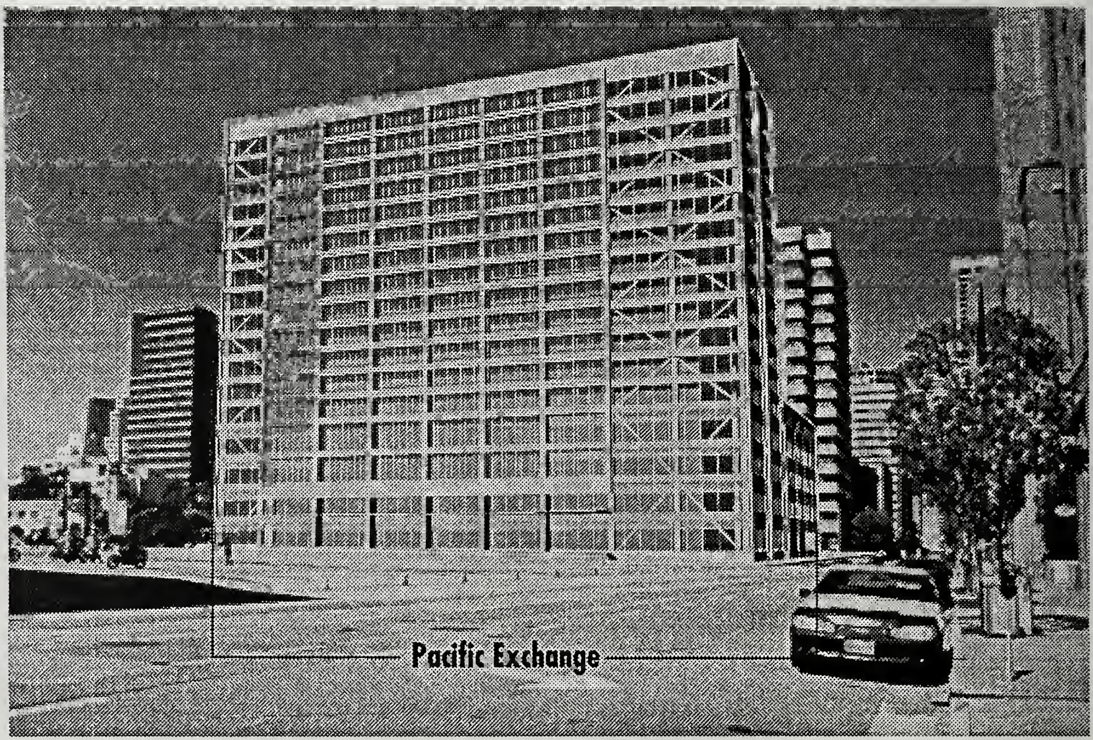
B — With Proposed Project

Source: 3D Visions

View Looking West from Folsom Street near Herb Caen Way (The Embarcadero) Figure 13



A — Project Site



B — With Proposed Project

Source: 3D Visions

View Looking Northwest from Spear Street South of Folsom Street Figure 14 about 10 feet wide.) This would be consistent with to the Folsom Boulevard design under consideration in the Transbay Concept Plan, to create a 25-foot-wide widened sidewalk on Folsom Street, generally between The Embarcadero and Second Street.

The 17-story project would be of similar height as the adjacent, 230-foot-tall 16-story 221 Main Street building, the 250-foot-tall, 17-story 211 Main Street building, and the 245-foot-tall, 18-story 201 Spear building north of the site. It would be taller than the 220-foot-tall Hills Plaza tower diagonally across from the project site at Folsom and Spear Streets. The project would be shorter than the approved 287-foot-tall, 16-story Gap building directly across Spear Street.

The new building would be taller than older buildings south of the site, such as the seven-story US Postal Service building, or the six-story 301 Folsom building. Overall, the project would complete the development of newer high-rise buildings along Spear and Main from Mission Street to Folsom Street. The project, with diagonal bracing visible through the glass at all four corners, aluminum detailing, and a transparent glass curtain wall, would be consistent with the variety of massing and materials found in newer developments in the vicinity.

The project would be visible from various locations in the vicinity. The 17-story tower would be seen from Folsom Street near Beale Street; views of the 5-story base element would be limited (see Figure 11.B). From further west on Folsom, near First Street, the project would be visible in the context of existing and approved development near the site (see Figure 12.B). From Herb Caen Way, near the planned Rincon Point Park, the project's 17-story tower would be visible with the approved Gap building as a prominent foreground element (see Figure 13.B). From south of Folsom Street towards the downtown, the project's Folsom Street frontage would be prominent, with the existing parking lot south of Folsom in the foreground (see Figure 14.B).

The project would partially obstruct private, south views of tenants using the podium open space and in the upper floors of 211 and 221 Main Street, northwest view from Hills Plaza, and west views from the approved Gap building.

The project would be partially visible from longer-range viewpoints, such as Twin Peaks or Potrero, as part of overall views of the Financial District. Those views would be limited by existing, intervening high-rise buildings. The project would not be a prominent skyline building. That is, in longer range views, the project would fit within and/or below the skyline of existing downtown development. The project would be visible from the Bay Bridge, south of the site. Those views would be intermittent, depending upon the type of vehicle (generally, because of the bridge railing height, riders in buses, trucks, vans or other larger vehicles have better views than those in autos), the direction of travel, and the presence of intervening buildings, such as Hills Plaza or the approved Gap building.

C. SHADOW AND WIND

SHADOW

SETTING

The two existing one to two-story buildings on site cast shadows on streets and sidewalks in the project vicinity. These two relatively small site buildings do not shade existing, approved, or planned open space.

City Planning Code Section 295, the Sunlight Ordinance

City Planning Code Section 295, adopted in 1984 pursuant to voter approval, prohibits the issuance of building permits for structures that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission unless the City Planning Commission, in consultation with the General Manager of the Recreation and Park Commission, determines that the shade would not have a significant impact on the use of such property. City Planning Code Section 295 generally prohibits new buildings, or additions to buildings, that would cause new shadow between the hours of one hour after sunrise and one hour before sunset, at any time of the year on open space under the jurisdiction of the San Francisco Recreation and Park Commission, unless that shadow is determined to be insignificant. The approved Rincon Point Park, east of the project site, will be developed and maintained by the Gap as part of its approved headquarters project, not by the Recreation and Park Department. Therefore, Planning Code Section 295 will not apply to it. The nearest open space owned by, or under the jurisdiction of, the Recreation and Park Department and subject to Section 295 is Justin Herman Plaza, about three blocks north of the site at the foot of Market Street.

As discussed in Land Use, Plans and Zoning, p. 40, the project is proposed to be included in the Rincon Point - South Beach Redevelopment Area, and as such, would not be subject to Section 295 of the Planning Code.

IMPACTS

Significance Criteria

A project would have a significant impact if it would result in new shadow on public open space under the jurisdiction of or designated to be acquired by the Recreation and Park Commission, if that shadow could be considered significant. As proposed in the Rincon Point - South Beach Redevelopment Area, the project would, as noted, not be subject to Section 295; however, that criterion is used for purposes of this EIR. As discussed below, the project would not shade open space subject Section 295. Therefore, the project would not have a significant effect.

Existing Open Space

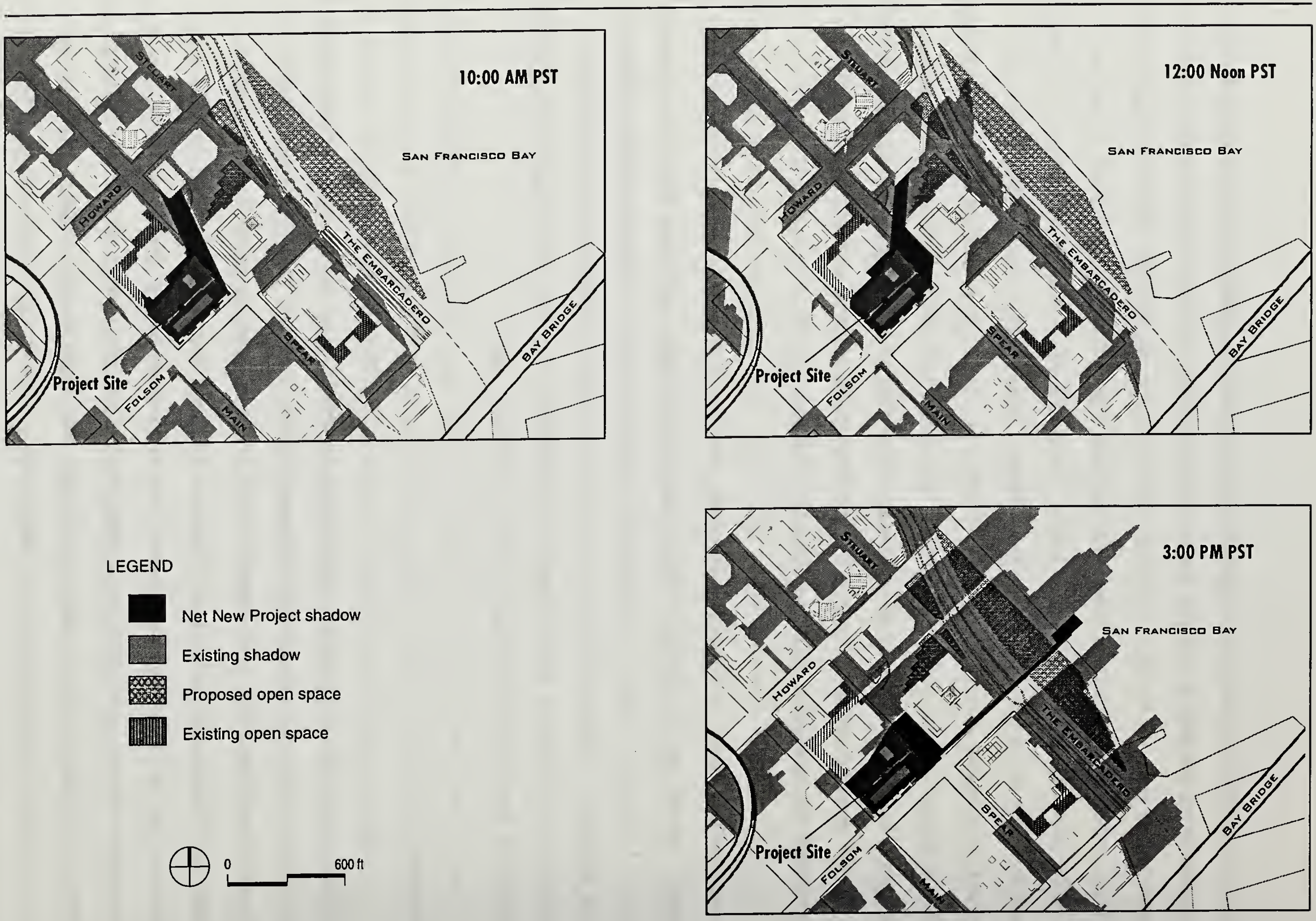
As shown in Figures 15 through 19, pp. 59, 61, 63, and 65, existing open space in the vicinity of the site consists of private, and publicly accessible plazas and sitting areas associated with buildings such as Hills Plaza and 221 Main Street; the latter includes a widened sidewalk and private, not publicly accessible rooftop open space above the podium level fronting Main Street. Proposed and approved open space in the vicinity includes Rincon Point Park, to be located between Howard and Harrison Streets and between the realigned Embarcadero Roadway and the Herb Caen Way pedestrian promenade along San Francisco Bay. This 3-acre public open space will be developed as part of the approved Gap headquarters, and will be privately developed and maintained. The Gap project will also include an approximately 10,000-square-foot plaza on its north side, providing open space for tenants and visitors.

Shadow patterns for existing and approved buildings and buildings under formal review in the project area (including existing buildings on site) and the project are shown for representative times of the day during the four seasons: during the winter and summer solstices, when the sun is at its lowest and highest, and during spring and fall equinoxes, when the sun is at its midpoint (see Figures 15 through 18). Shadow conditions from July through November mirror conditions from January through May (solar time). The times selected for analysis include 10:00 a.m., 12:00 p.m., and 3:00 p.m. Pacific Standard Time (PST) in March and December, and Pacific Daylight Time (PDT) in June and September. The analysis includes shadow cast on streets, sidewalks, pedestrian areas, and open space in the area of potential project impact. The diagrams show existing and approved building shadow and net new shade resulting from the project.

By convention, "east" and "west" refer to the directions of Folsom Street and parallel streets. "North" and "south" refer to the directions of Spear and Main Streets, and parallel streets. As shown in Figure 15, true north is about 45 degrees clockwise from the Spear Street alignment. Figures 15 to 18, pp. 59, 61, 63, and 65, respectively, show shadow conditions for December, March, June, and September. Impacts related to Planning Code Section 295 (the Sunlight Ordinance) are also discussed below.

December 21

At 10:00 a.m. PST on December 21, new shadow would cover the narrow space (primarily a service alley) between the proposed Exchange building and the 221 Main Street building to the north (see Figure 15). New shadow would cover an area up to 380 feet along Spear Street, between Howard and Folsom Streets, and extend across Spear Street, north of the approved Gap building. This new shadow would cover about 220 feet of sidewalk on either side of Spear Street, and would newly shade about 15% of the open space (i.e., widened sidewalk and rooftop patio) at 221 Main Street. This space is now in sun at this time. It would not affect the open space at the Gap building. The project would not shade Rincon Point Park at 10:00 a.m.



Source: CADP

Project Shadow Patterns — December 21 Figure 15

Pacific Exchange EIR

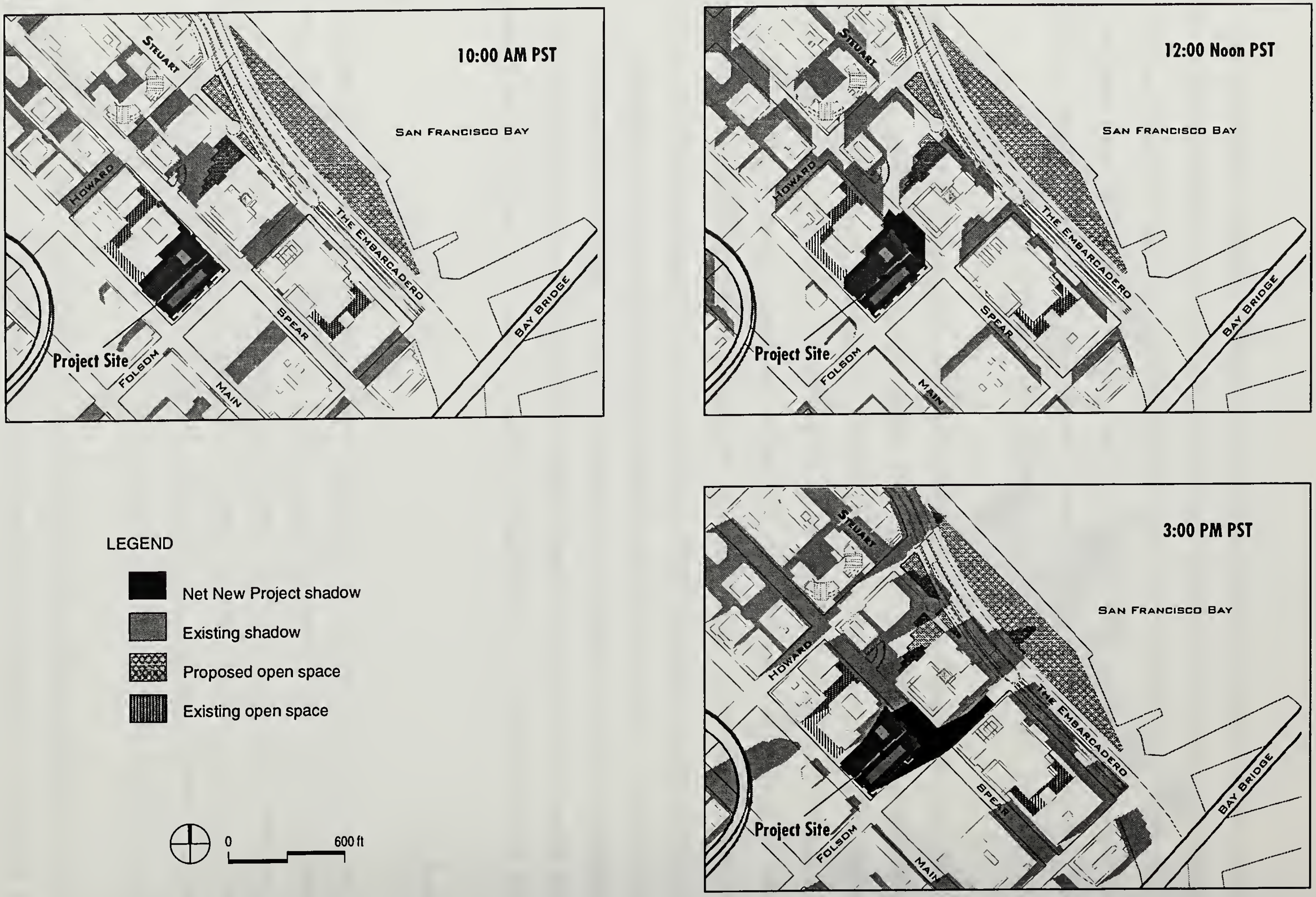
At noon, shadow from the project would cross Spear Street, extending almost to Steuart Street (see Figure 15). New shadow would cover the service area between the project and the 221 Main Street building to the north; the project would not shade the approved open space adjacent to the Gap building. New shadow would cover up to 280 feet along Spear Street, between Howard and Folsom Street, covering about 220 feet of sidewalk on each side of Spear Street. The project would not shade Rincon Point Park at noon.

At 3:00 p.m., new shadow would stretch from the project site about 790 feet across Spear and Steuart Streets and Rincon Point Park into San Francisco Bay, shading the north sidewalk of Folsom Street. Project-related shadow would extend about 90 feet into San Francisco Bay (see Figure 15). Most of the project shadow would fall on areas that will be shaded by the approved Gap building. The project would newly shade a roughly 20-foot-wide strip of Rincon Point Park, completing the shading of the park north of Folsom Street. This net new shade at Rincon Point Park would be a strip comprising about 2% of the total area of the park. This band of shade would also cross the Herb Caen Way pedestrian promenade. Spear Street adjacent to the project site, and the sidewalks on either side of Spear Street, would be covered by new shadow, as would the north sidewalk of Folsom Street east of the project site, including the sidewalk adjacent to the approved Gap Building.

March 21

At 10:00 a.m. PST on March 21, new shadow would cover the service area between the project and the 221 Main Street building, as well as up to 180 feet of each sidewalk on the project sides of both Main and Spear Streets (see Figure 16). The project would also newly shade most of the existing widened sidewalk at 221 Main Street and the private (not publicly accessible) rooftop open space on the podium level of the 221 Main Street building. The project would not shade Rincon Point Park at 10:00 a.m.

At noon, new shade would cover the service area between the project and 221 Main Street (see Figure 16). New shadow would also cover an area stretching up to 220 feet along Spear



Source: CADP

EIP

Project Shadow Patterns — March 21 Figure 16

Pacific Exchange EIR

Street, between Howard and Folsom Streets, including the east and west sidewalks. The project would not shade Rincon Point Park at noon.

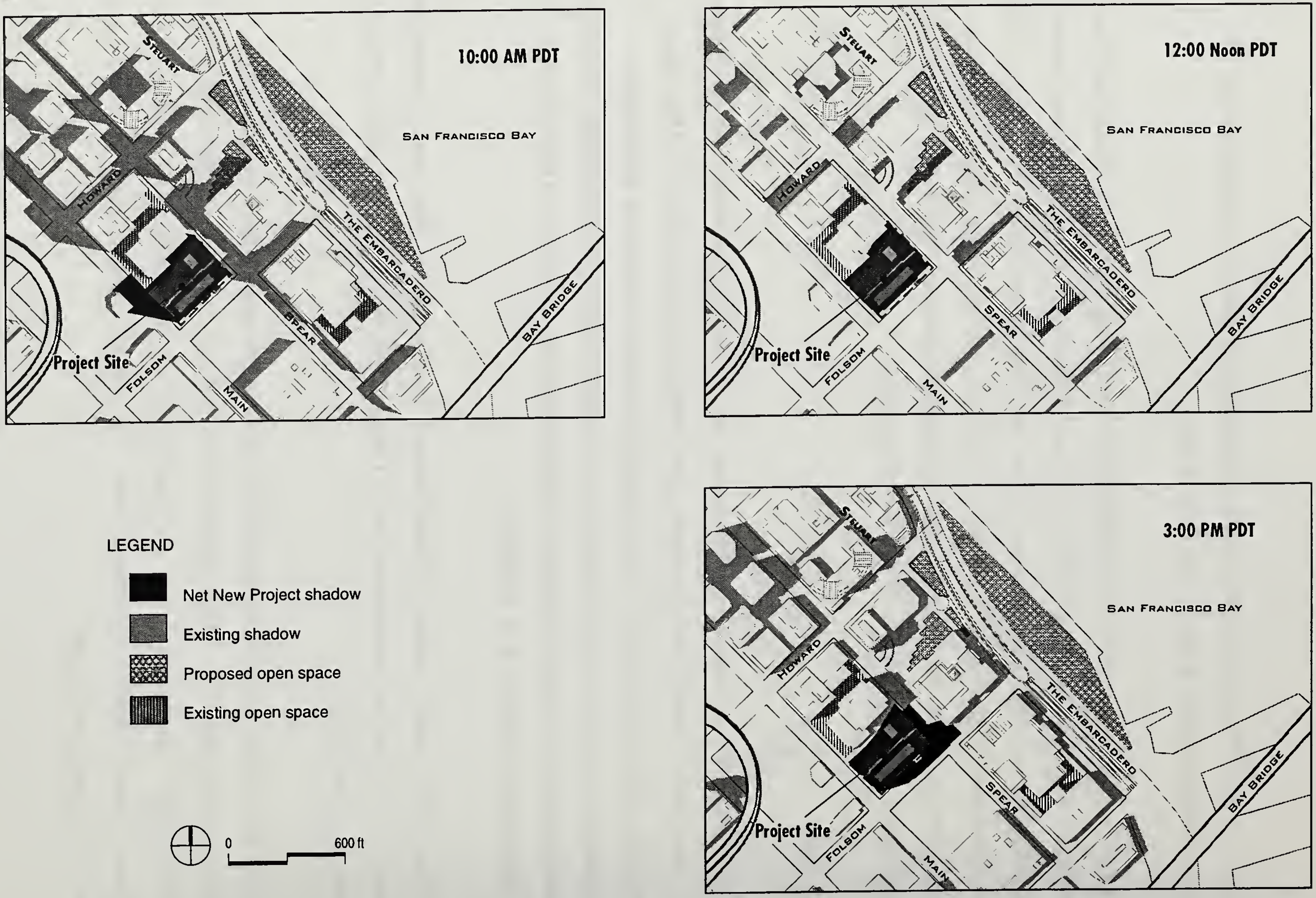
At 3:00 p.m., project shadow would reach Spear and Folsom Streets near the project site (see Figure 16). Shadow would newly cover the intersection of Spear and Folsom Streets and most of Folsom Street east of Spear Street, almost to Steuart Street. New shade would cover the sidewalks adjacent to the project site along Spear and Folsom Streets and about 220 feet of sidewalk on the south side of Folsom Street between Spear and Steuart Streets. The project would not shade Rincon Point Park at 3:00 p.m.

June 21st

At 10.00 a.m. PDT on June 21, project shadow would reach across Main Street (see Figure 17). New shadow would cover the service area between the project and 221 Main Street. It would also cover up to about 270 feet of sidewalk along the east side of Main Street, including an area of the widened sidewalk at 221 Main Street about 85 feet long. The new shadow would stretch about 50 feet west of Main Street in some areas. The project would not shade Rincon Point Park at 10:00 a.m.

At noon, project shadow would not extend beyond the adjacent 221 Main Street building (see Figure 17). The service area between the 221 Main Street building and the project would be covered by new shadow.

At 3:00 p.m., shade would cover portions of Spear and Folsom Streets adjacent to the project site (see Figure 17). New shadow would cover the sidewalks adjacent to the project site along Spear and Folsom Streets, and a portion of the sidewalk up to 60 feet long at the northeast corner of Spear and Folsom Streets. The project would not shade proposed Rincon Point Park at any time in June.



Source: CADP

EIP

Project Shadow Patterns — June 21 Figure 17

Pacific Exchange EIR

September 21

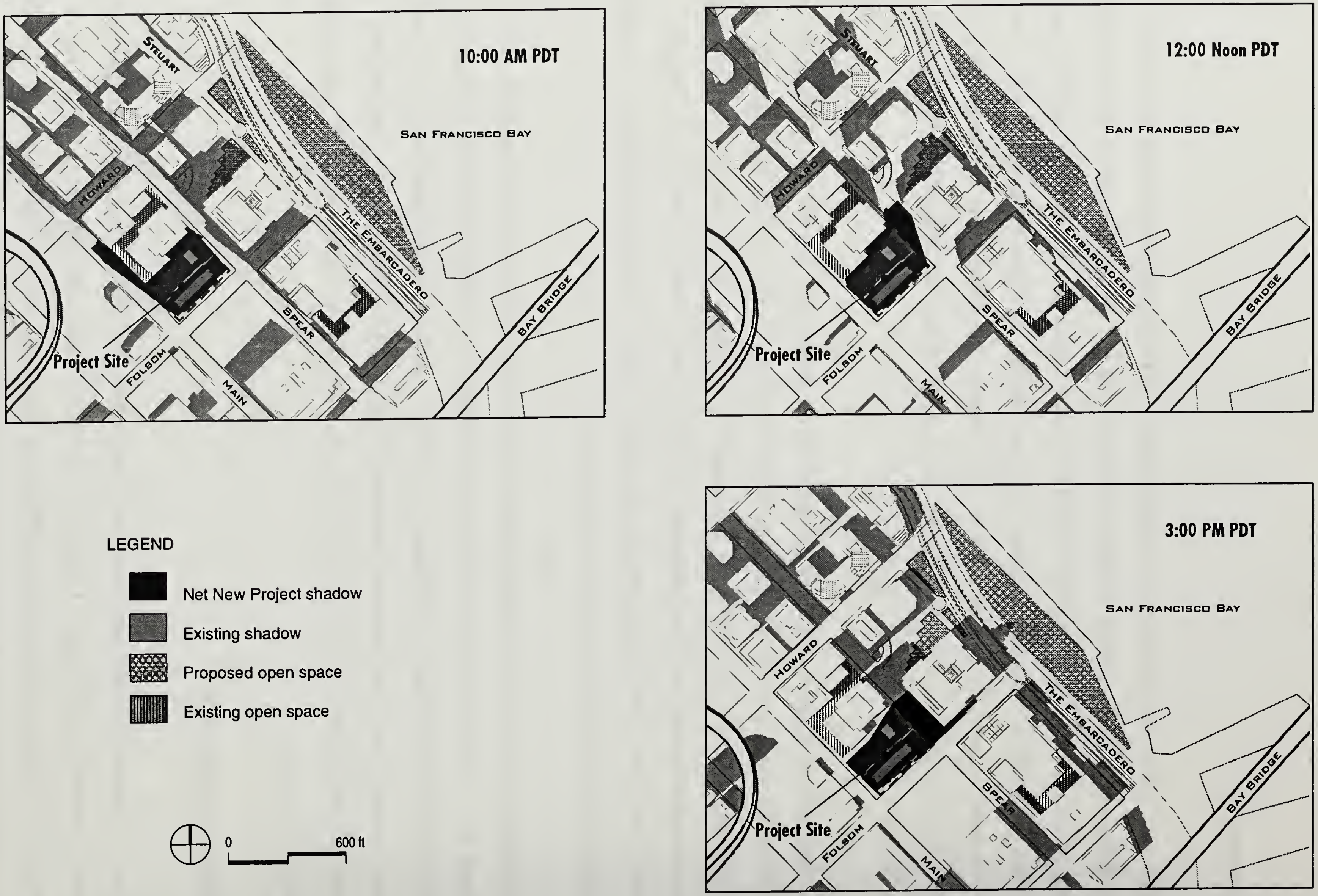
At 10 a.m. PDT on September 21, project shadow would extend north along Main Street (see Figure 18). New shadow would cover about 410 feet of sidewalk along the east side of Main Street, including the widened sidewalk in front of the 221 Main Street building and the private, nonpublicly accessible rooftop open space above it. New shade would also cover the service area between the project and 221 Main Street. Project shadow would not affect the sidewalk on the west side of Main Street. The project would not shade Rincon Point Park at 10:00 a.m.

At noon, project shadow would extend across Spear Street (see Figure 18). New shadow would cover about 240 feet of sidewalk on the west side of Spear Street and about 90 feet on the east side, at the north end of the approved Gap building. New shadow would cover the service area between the project and the 221 Main Street building to the north. Project shadow would not affect the approved open space adjacent to the Gap building. The project would not shade Rincon Point Park at this time.

At 3:00 p.m., the project would shade Spear Street and the proposed Gap building (see Figure 18). New shadow would cover about 210 feet of sidewalk along both sides of Spear Street and the street itself. New shadow would also reach along the north side of Folsom Street including the north sidewalk for about 170 feet east of Spear Street. The project would not shade the south side of Folsom Street. The project would not shade Rincon Point Park at 3:00 p.m.

Shadow on Open Space

Figure 19 shows the maximum extent of project shadow as though cast on the ground without existing intervening buildings. Open space included in this area includes the approved Rincon Point Park, the publicly accessible open space adjacent to the approved Gap building, the widened sidewalk along Main Street at the 221 Main Street building, and the private,



Source: CADP

EIP

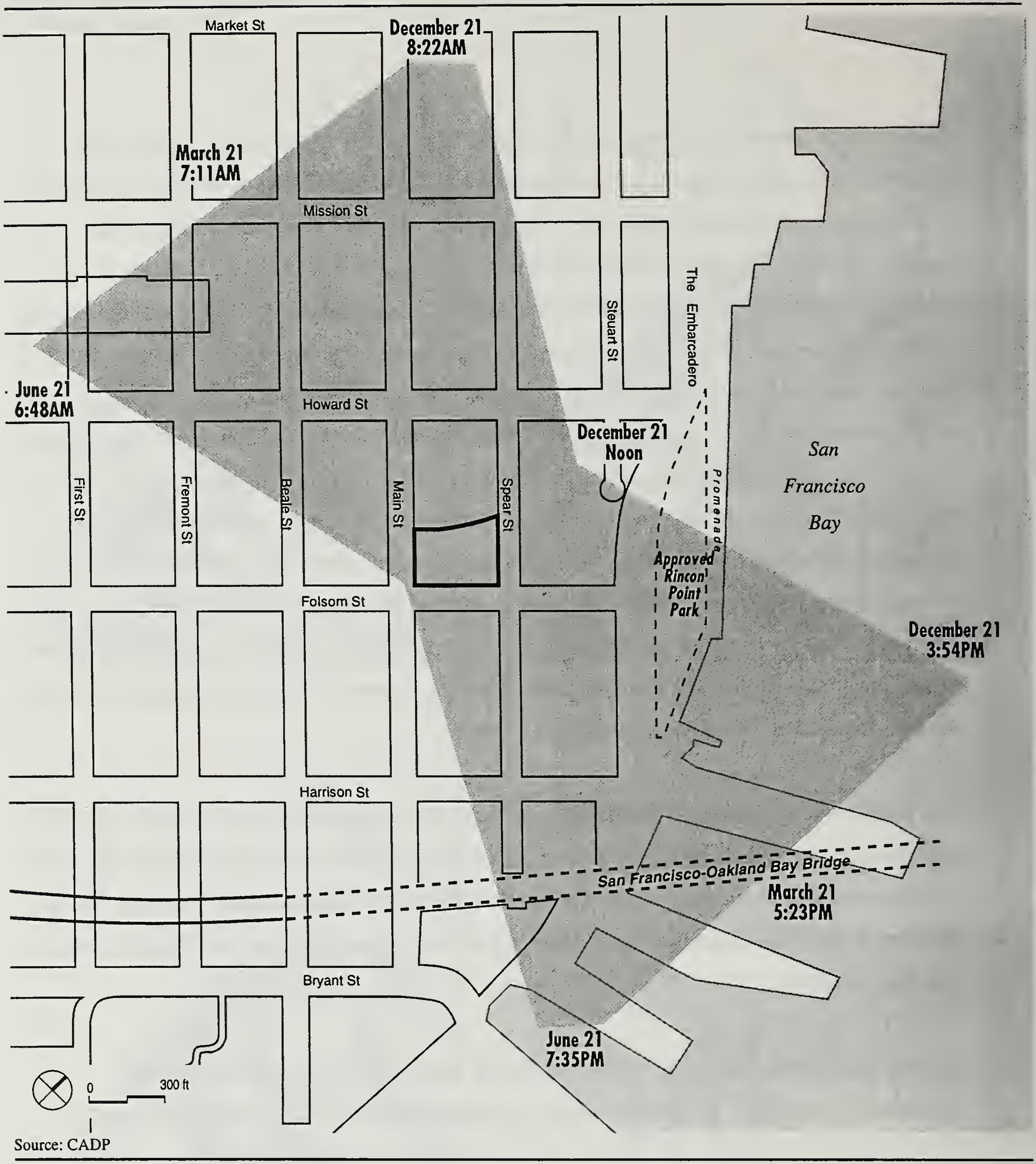
Project Shadow Patterns — September 21 Figure 18

Pacific Exchange EIR

nonpublicly accessible open space at the podium level of 221 Main Street. The project would not affect the planned open space adjacent to the Gap building at any time of the day or year. The project would affect the widened sidewalk and the podium level private, nonpublicly accessible open space at 221 Main Street and the service area between the project and 221 Main Street at 10:00 a.m. year round, particularly in March and September, when the area would be completely shaded by the project. The project would have its greatest effect on Rincon Point Park at 3:00 p.m. PST on December 21 (see Figure 15, p. 59), when it would newly shade about 2% of the new park between Folsom and Howard Streets, completing the shading of the portion of the park north of Folsom. At that time, about 85% of the entire park will already be shaded by existing and approved buildings. Regarding the proposed project's open space, the widened sidewalk on the Folsom frontage of the project could include amenities, such as seating areas associated with retail uses. This south east-facing area would be in sunlight during mornings and midday periods most times of the year. The project itself would shade this area at about 3:00 p.m., generally in March through September, as shown in Figures 16 and 17.

The project would not shade Justin Herman Plaza, the nearest open space in Recreation and Park Department jurisdiction, at any time. As noted, the approved Rincon Point Park will be developed and maintained by the Gap as part of its headquarters project, and not by the Recreation and Park Commission, and the project would not affect any existing Recreation and Park property.

As discussed above, the project would not shade open space subject to the Sunlight Ordinance. Therefore, the project would not have a significant adverse shadow impact.



Source: CADP

EIP

Year-Round Shadow Trace Figure 19
Pacific Exchange EIR

WIND

SETTING

U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.[1] Of the 16 primary wind directions measured at a Weather Bureau station at the United Nations Plaza (at a height of 132 feet), four directions occur most frequently and account for most of the strongest winds: northwest, west-northwest, west, and west-southwest. Calm conditions occur about 2% of the time.

Average wind speeds are highest during summer and lowest during winter. The strongest peak winds, however, occur during winter, when speeds of up to 47 miles per hour have been recorded.[2] Typically, the highest wind speeds occur during the mid-afternoon hours, and the lowest occur during early morning.

Pedestrian Comfort Wind Criteria

Wind conditions affect pedestrian comfort on sidewalks and in other public areas. The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Large buildings can redirect wind flows around and down to street level, resulting in increased wind speed and turbulence at street level. To provide a comfortable wind environment for San Franciscans, the City established specific comfort criteria for evaluation of proposed buildings. The City Planning Code specifically outlines these criteria for the Downtown Commercial (C-3) Districts and for the Rincon Hill, Van Ness Avenue, and part of the South of Market.[3] A portion of the project site is currently designated C-3-S District (Downtown Support), and the entire project site is proposed to be redesignated as C-3-O (SD) in the Downtown Plan. While the project would be subject to Redevelopment Plan and Design for Development controls; the Rincon Point-South Beach Design for Development includes, as one criterion for design consideration, an examination of the proposed project's compliance with the Planning Code. The EIR reviews wind impacts of the proposed project in light of the Planning Code Section 148 pedestrian comfort and hazard criteria.

The comfort criteria are based on pedestrian-level wind speeds that include the effects of turbulence. These adjusted wind speeds are referred to as "equivalent wind speeds." Section 148 of the City Planning Code establishes an equivalent wind speed of 7 miles per hour in seating areas and 11 miles per hour in areas of substantial pedestrian use as comfort criteria. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than 10% of the time year round between 7:00 a.m. and 6:00 p.m.[4] If existing wind speeds exceed the comfort level, new buildings and additions must be designed to reduce ambient wind speeds to meet these requirements, unless certain requirements are met for an allowable exception as described in Section 148. As described below under Impacts, the pedestrian comfort criterion is currently exceeded at 14 of 35 test locations for existing conditions.

The locations studied in the wind tunnel tests were all sidewalk locations. No designated seating areas are located in the area evaluated; therefore, this analysis uses the 11 miles per hour criterion, and not the 7 miles per hour criterion for seating areas. Ten of the 35 street level locations tested meet the 7 miles per hour criterion.

Wind Hazard Criteria

Section 148 of the City Planning Code also establishes as a hazard criterion an equivalent wind speed of 26 miles per hour for a single full hour per year. No building or addition would be permitted that would cause wind speeds to exceed the hazard level for more than one hour of any year. As described below, the hazard criterion is not now exceeded at any of the 35 test locations.

IMPACTS

Significance Criteria

As noted, the Planning Code contains wind comfort and hazard criteria (Section 148 and other sections, noted above). The project is discussed in relation to both criteria. A project that would cause exceedences of the comfort standards would not be considered to have a significant impact. The hazard criterion is the significance threshold. A project that would cause equivalent wind speeds to reach or exceed 26 miles per hour for a single full hour of the year would, therefore, have a significant impact.

As described below, the hazard criteria is not now exceeded with existing conditions at the locations tested, and the criterion would not be exceeded with the project or other scenarios tested. The project would not have a significant impact related to wind.

The project would include amendment of the Downtown Plan to redesignate all of the site from P and C-3-S to C-3-O (SD) (Downtown Office [Special Development] District). The project, if incorporated by amendments into the *Rincon Point-South Beach Redevelopment Plan* as proposed, would be under San Francisco Redevelopment Agency jurisdiction and not regulated by the wind criteria of Section 148 of the City Planning Code. However, as discussed above, the effects of the project are evaluated in relation to these criteria.

Impact Analysis

Using a wind tunnel and a scale model of the downtown San Francisco area surrounding the project site, wind speed measurements were made at 35 surface test locations.[5] Tests were conducted for the project site in its existing condition, with the proposed Exchange building, and with both the Exchange and the approved Gap building. A shorter tower alternative was also tested, as discussed in Chapter VII, Alternatives. The wind tunnel tests followed City Planning Code Section 148 methodology, adjusted to account for the wind speed profile at the project site at the edge of Downtown. Appendix B presents the wind tunnel test methodology and results. Wind speeds do not exceed 26 mph for more than one hour per year at the 35 test points, under either existing or proposed conditions, as shown in Figure 3 of Appendix B. Table 2 in Appendix B lists wind speeds that would be exceeded 10% of the time. Because all of the test locations studied represent sidewalk locations, the 11-mile-per-hour pedestrian comfort criterion is pertinent.

In the existing wind environment, wind speeds range from 4 to 17 miles per hour at the 35 locations tested, 14 of which now exceed the 11-mile-per-hour pedestrian comfort criterion. Eight of these locations where the comfort criterion is exceeded are mainly near the intersection of Main and Folsom Streets; however, winds on Spear Street between Folsom and Harrison Streets also exceed the criterion at two locations. The same is true of winds at four locations along Main and Spear Streets north of the project site. Existing wind conditions in the vicinity of the project site may be attributable, in part, to the open nature of the area and its resulting lack of wind protection from upwind development.

The project would result in wind speeds ranging from 5 to 15 miles per hour, a range similar to existing conditions. With the project, 22 of the 35 test locations would exceed the comfort criterion, an increase of eight locations over existing conditions. In all cases, the locations where the comfort criterion is exceeded under existing conditions would continue to exceed the criterion after project construction. Six of the locations that would newly exceed the criterion would be near the intersection of Spear and Folsom Streets, and north of that intersection along Spear Street. Two locations on opposite sides of Main Street north of Folsom Street would also newly exceed the comfort criterion as a result of the project.

The impact of the project on the wind environment in the project area would be mixed. The project would reduce existing wind speeds at 8 of the 35 test locations, leave them unchanged at 8 locations, and increase speeds at 19 locations. The number of locations exceeding the comfort criterion would increase from 14 to 22. The greatest change in wind speed would be the anticipated increase of 7 miles per hour for the southwest corner of Spear and Folsom

Streets, where the wind speed would increase from 7 to 14 miles per hour. Wind speeds at the northwest and northeast corners of Spear and Folsom Streets would increase by 6 miles per hour to 12 and 13 miles per hour. All other increases would be less than 6 miles per hour, and the upper end of the measured range of wind speeds would drop from 17 to 15 miles per hour.

With the project and the approved Gap building, wind speeds would range from 3 to 16 miles per hour. Of the 35 test locations, 20 would exceed the pedestrian comfort criterion. The net increase of six locations over existing conditions (compared to eight with the project) would reflect seven new exceedences and one eliminated exceedence. Compared to the results for the project alone, the Gap building would have three fewer exceedances along the east sidewalk of Spear Street and one more exceedance along the west side of Spear Street, adjacent to the project site. Similar to the project by itself, five of the new locations where the criterion would be exceeded would be at the intersection of Spear and Folsom Streets, and north of that intersection on the west side of Spear Street. The two new locations on Main Street that would, with project conditions, exceed the comfort criterion would also exceed the criterion with construction of the Gap building.

Compared to existing conditions, the project and the approved Gap building would reduce existing wind speeds at 10 of the 35 test locations, leave them unchanged at 11 locations, and increase speeds at 14 locations. The greatest changes in wind speeds would be increases of from 7 to 10 miles per hour for three locations on the west side of Spear Street adjacent to the project site and one location at the northeast corner of Spear and Folsom Streets. At these locations, wind speeds would increase from 8 to 16 miles per hour, from 7 to 14 miles per hour, from 6 to 16 miles per hour, and from 7 to 15 miles per hour. All other increases would be less.

Although wind speeds with the project alone and with the project and the Gap building would change from existing conditions, the range of wind speeds would not vary substantially among the three cases studied. Existing wind speeds at tested locations range from 5 miles per hour to 17 miles per hour. With the addition of the project, the range of wind speeds in pedestrian areas would be from 4 miles per hour to 15 miles per hour. With the project and the Gap building, the range of wind speeds in pedestrian areas would drop to 3 to 16 miles per hour. Therefore, winds would remain essentially within the same range for all cases tested. As noted above, the hazard criterion wind speed is not, and would not be, exceeded under any of the three scenarios.

A proposed new Transbay Terminal is in early stages of planning, either at the location of the existing terminal or at a site on Howard Street between Beale and Main Streets west of the project site. While it could cover the entire block, the new Terminal would be relatively low in height, at 65 to 90 feet, compared to existing high-rise development to the north, east, and west, including the proposed Exchange project. Therefore, the proposed new Transbay Terminal would not be expected to substantially affect ground-level winds. Because the project would generally be downwind from the proposed Transbay Terminal, it would not be expected to substantially affect outdoor pedestrian areas associated with the proposed Transbay Terminal.

NOTES: Shadow and Wind

1. The U.S. Weather Bureau data used in this analysis were gathered at a weather station atop the Old Federal Building at 50 United Nations Plaza during the years 1945 through 1950. During each of these years, data were taken hourly for 16 wind directions. The database, consisting of 32,795 hourly observations, is of sufficient size to provide a reliable estimate of future wind conditions in San Francisco.

2. E. Jan Null, *Climate of San Francisco*, NOAA Technical Memorandum, *NWS WR-126*, February 1978.

3. City Planning Code, Sections 148, 249.1(b)(3), 243(c)(9), 263.11(c).

4. The City Planning Code specifies the hours of 7:00 a.m. to 6:00 p.m. The available weather data cover the hours of 6:00 a.m. to 8:00 p.m. Therefore, observations from two additional evening hours and one additional morning hour are included in these data.

5. Donald Ballanti, Certified Consulting Meteorologist, *Wind Tunnel Analysis for the Proposed Pacific Exchange Project, San Francisco*, prepared for EIP Associates, March 1998.

D. TRANSPORTATION[1]

SETTING

REGIONAL ACCESS

The I-80 freeway provides regional access to the project site and vicinity, in the South of Market Area of San Francisco approximately two blocks south of the project site between Harrison and Bryant Streets. East Bay access to the site is via I-80 (Bay Bridge) westbound, from the Fremont Street off-ramp, which touches down south of Howard Street. Access to the Bay Bridge eastbound is via the on-ramp at First Street and Harrison Street. From the South Bay access to the site is via the I-80 eastbound Fourth Street off-ramp at Bryant Street; access to I-80 westbound is via the Fourth Street and Harrison Street on-ramp. See Figure 1, Project Location, p. 17.

LOCAL STREET SYSTEM

The site occupies the south part of the block bounded by Spear, Folsom, Main, and Howard Streets. Folsom Street from South Van Ness to Main Street is primarily a one-way arterial with four eastbound lanes. However, between The Embarcadero and Main Street, Folsom Street is a two-way street with three eastbound lanes and one westbound lane; all major intersections are controlled by traffic signals. On-street parking is provided along both curbs. At the project site, the north curb is designated for vanpool vehicle parking only. The *San Francisco General Plan*, Transportation Element, identifies Folsom Street as a Major Arterial from The Embarcadero to 13th Street, and a Citywide Bicycle Route (Class II)[2] from The Embarcadero to South Van Ness Avenue.

In the vicinity of the site, Main Street is a one-way street, with three northbound travel lanes; all major intersections are controlled by signals. Metered, on-street parking is provided along both curbs, except that along the project frontage there is currently a red zone used for Golden Gate Transit bus layovers. Main Street is two-way in the block south of Folsom Street. Spear Street is a one-way street with two southbound travel lanes with signals at all major intersections. Metered, on-street parking is provided along both sides of the street.

Howard Street is a two-way arterial with two lanes in each direction between The Embarcadero and Fremont Street, and is a one-way arterial west of Fremont Street with four lanes in the westbound direction. Howard Street is one of the primary routes from downtown to the I-80 westbound on-ramp at Fourth Street/Harrison Street. On-street parking is prohibited during the PM peak period (4:00 to 6:00). The Transportation Element identifies Howard Street as a Major Arterial and a Citywide Bicycle Route.

In the project vicinity, between Spear and Third Streets, Harrison Street is two-way and generally contains three westbound lanes and one eastbound lane, except between First and Second Streets where two westbound lanes and one eastbound lane are provided. Between Spear Street and The Embarcadero there are two lanes in each direction. It serves as a primary travel route to the First Street I-80 eastbound on-ramp. Harrison Street is a one-way arterial with five lanes in the westbound direction west of Third Street. The Transportation Element identifies Harrison Street between The Embarcadero and 13th Street as a Major Arterial.

The Embarcadero has three continuous lanes in each direction between Mission Street and Broadway and two travel lanes in each direction between King Street and Mission Street. Parking along The Embarcadero is restricted during the a.m. and p.m. peak periods. The Embarcadero is a designated freight traffic route in the Transportation Element. It is also a Transit Important Street in the Transit Preferential Street Network and is a Citywide Bicycle Route. The E-Line, a recent extension of the MUNI light rail system runs from the Market Street tunnel south under The Embarcadero, emerging to a surface stop at Folsom Street and The Embarcadero, and then runs in the median of The Embarcadero, to King Street.

INTERSECTION CONDITIONS

Existing intersection operating conditions were evaluated for the weekday PM peak period (4:00 PM to 6:00 PM). PM peak period intersection turning movement counts were obtained from the *Transbay Area Plan Transportation Study.*[3] Operating characteristics of intersections are described by the concept of Level of Service (LOS). LOS is a qualitative description of an intersection's performance based on the average delay per vehicle. Intersection LOS ranges from A, which indicates free flow or excellent conditions with short delays, to F, which indicates congested or overloaded conditions with extremely long delays. A detailed description of LOS is included in Appendix C, Transportation.

Table 4, p. 85, presents the results of the intersection LOS analysis for existing weekday PM peak hour conditions. As the table indicates, the intersections at Folsom Street/The Embarcadero and Harrison Street/First Street currently operate at LOS E and LOS F, respectively, as vehicles try to access the freeway on-ramps on Harrison Street. All other study intersections currently operate at LOS D or better during the weekday PM peak hour.

TRANSIT

The project site is readily accessible by public transit, with 11 San Francisco Municipal Railway (MUNI) bus lines providing service within a two-block radius of the project site and MUNI Metro service along Market Street (the closest station is The Embarcadero Station, approximately three blocks north of the site). MUNI lines currently serving the area include Routes 1, 14, 14L, 14X, 30X, 41, 42, 80X, 81X, and 82X. The 80X route operates on Main Street adjacent to the site. There are no MUNI stops on the project frontage or project block. In early 1998, the E-Line, a light rail extension, began service to the Caltrain station at Fourth and King Streets, from the Market Street subway, to street-level service via a tunnel portal at Folsom Street and The Embarcadero. MUNI plans to revise service on the express bus lines serving the Caltrain Station on routes 80X and 82X, and discontinue route 81X, because of the availability of E-line service along that route. Golden Gate Transit, AC

Transit, and the San Mateo County Transit District (SamTrans) provide service to the Transbay Terminal, which is located approximately three and a half blocks northwest of the project site. Figure 20 presents transit routes in the project area.

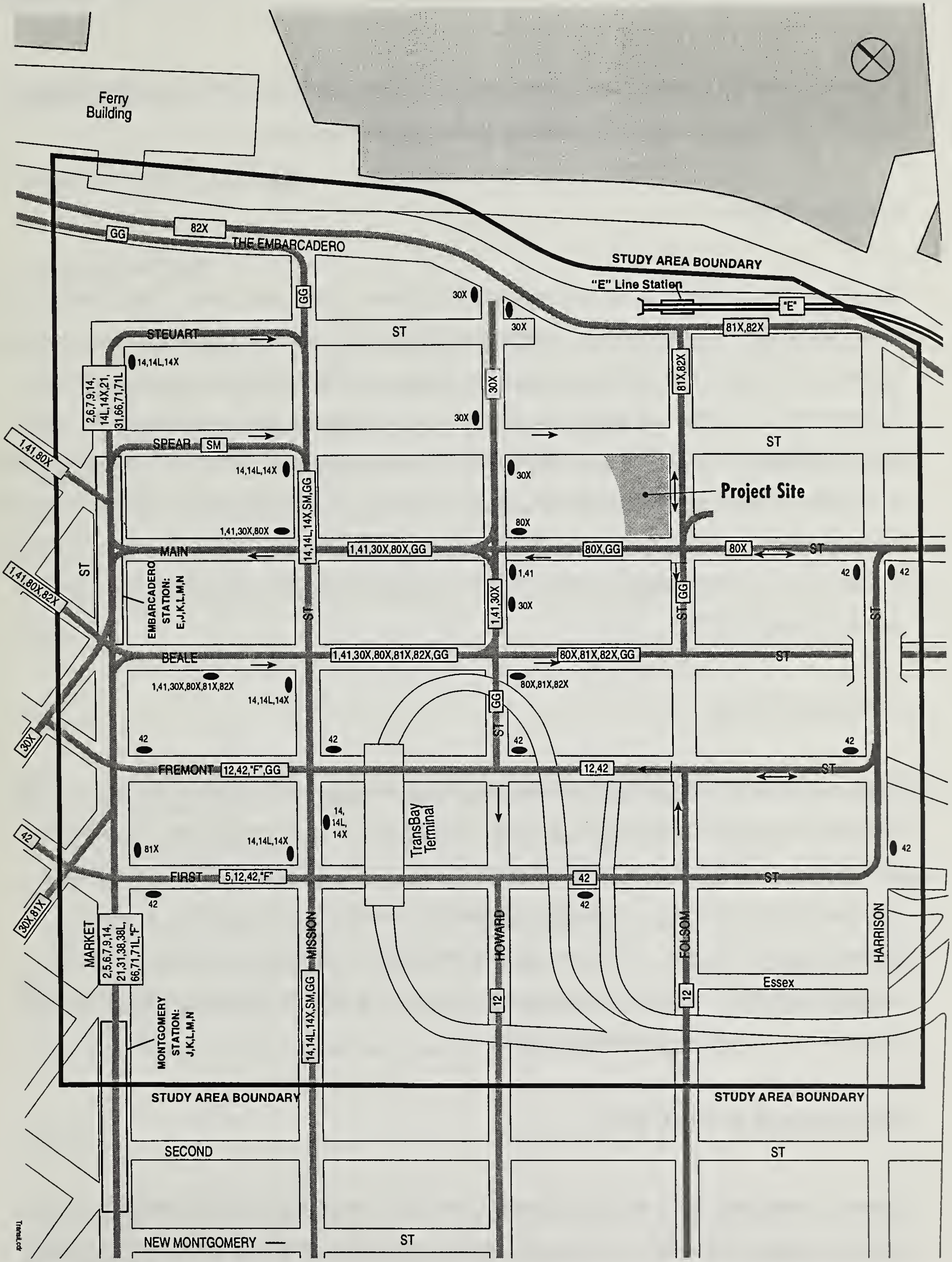
SamTrans provides service throughout San Mateo County to downtown San Francisco. SamTrans patrons board/disembark only in San Francisco with destinations/origins in San Mateo County. Seven of the nine SamTrans routes providing service to downtown San Francisco serve the Transbay Terminal.

AC Transit provides service in western Alameda County and western Contra Costa County, and downtown San Francisco. Thirty-seven AC Transit routes serve the Transbay Terminal, of which 33 provide service only during commute periods.

Golden Gate Transit serves Marin and Sonoma Counties; the project area is served by 8 Golden Gate Transit bus routes providing service throughout the day and 18 commute period routes. All those routes have stops on the streets surrounding the Transbay Terminal. The Main Street project frontage is used as a layover area for up to three GGBHTD buses. As with Samtrans, Golden Gate Transit serves Marin and Sonoma County passengers only, who board/disembark in San Francisco.

PARKING

Existing parking conditions were examined within approximately one-quarter mile (roughly two to three blocks) of the project site, including the blocks bounded by Market Street on the north, The Embarcadero on the east, Bryant Street on the south, and First Street on the west.[4] Along the site's Spear Street frontage, there are approximately seven metered on-street parking spaces on the west side of the street; along the Folsom Street frontage, curb parking for approximately seven vans is designated for vehicles with San Francisco Vanpool Permits, on the north side of the street; on the Main Street site frontage, a red zone provides a Golden Gate Transit bus layover zone, which accommodate up to three buses.



Source: Korve Engineering

EIP

Transit Routes in the Project Vicinity Figure 20

Pacific Exchange EIR

(Approximately 90 Golden Gate Transit buses are accommodated at the parking lot directly south of the project across Folsom Street during midday layover.)

On-Street Parking

There are approximately 1,220 on-street parking spaces in the study area. The supply of on-street parking in the study area is mostly metered and dedicated to short-term use, generally between 7:00 AM and 6:00 PM. On-street parking is 95% to 100% occupied during the midday period.[5] There are also about 180 motorcycle parking spaces located in the study area in addition to the 1,220-space inventory. Approximately 48 motorcycle parking spaces are located adjacent to the project site, on the west side of Main Street between Howard and Folsom Streets. During peak travel hours (4:00 - 6:00 PM), parking restrictions reduce the number of on-street parking spaces on Mission Street and on the major approach routes to the Bay Bridge and U.S. 101.

Off-Street Parking

There are about 6,120 publicly available off-street parking spaces in the study area. (This inventory does not include private parking spaces that are restricted for use by residents, customers and employees of private businesses, or public agencies.) Off-street parking includes both surface lots and parking structures. South of Folsom Street, parking is primarily in surface lots. Off-street parking facilities in the study area have an average occupancy of 86% during the midday period (12:00 - 3:30 PM) with approximately 5,280 occupied and about 845 unoccupied spaces.[6]

PEDESTRIAN CONDITIONS

Existing signalized crosswalks at Folsom Street/Main Street and Folsom Street/Beale Street operate at pedestrian LOS A conditions, where pedestrians generally choose their walking paths freely without conflict with other pedestrians.

IMPACTS

SIGNIFICANCE CRITERIA

Local Intersections

In San Francisco, a project is typically considered to have a significant effect on the environment if it would cause an intersection to deteriorate to an unacceptable level (from LOS D or better to LOS E or LOS F, or from LOS E to LOS F); interfere with existing transportation systems causing substantial alteration to circulation patterns or causing major traffic hazards; contribute substantially to cumulative traffic increases at intersections that would result in deterioration of traffic conditions to unacceptable levels; or contribute substantially to cumulative traffic increases at intersections already operating at unacceptable levels.

Transit

In San Francisco, a project is typically considered to have a significant effect on the environment if it would cause a substantial project-specific or cumulative increase in transit demand which cannot be accommodated by existing or proposed transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in operating costs such that significant adverse impacts in transit service levels could result. The project would also have a significant effect on the environment if, when considering cumulative development in the area, it would contribute substantially to the deterioration of transit service to unacceptable levels.

Parking

The City has a Transit First policy. San Francisco's General Plan policies emphasize the importance of public transit use, discourage auto commuting, including discouragement of provision of facilities which encourage automobile use. Drivers that could not find available nearby parking would either park farther from their destination or switch travel modes, to transit or carpools for example. Therefore, creation of parking demand which cannot be met by existing or proposed parking facilities would not be considered a significant environmental effect. However, the City would generally consider whether the unmet parking demand would result in other significant physical effects.

Pedestrian/Bicycle

For purposes of this analysis, the project would be considered to have a significant effect on the environment if it were to result in substantial pedestrian overcrowding on public sidewalks creating an unacceptable pedestrian LOS; or create particularly hazardous conditions for pedestrians or bicyclists.

As discussed below, there would be no project-specific significant effects on traffic, transit, parking, or pedestrian conditions. The project would contribute to cumulative LOS E or F conditions at the Folsom/The Embarcadero and Harrison/First Street. Although the project contribution to cumulative impacts would be relatively small, and the projected deterioration would occur with or without the project, the cumulative impact is significant and because the project would contribute to it, the project is considered to have a significant impact related to these cumulative conditions.

METHODOLOGY

Person-trip generation for the project is based on information provided by the Project Sponsor about existing Pacific Exchange operations; the transportation studies used for this EIR; and rates obtained from the *Guidelines for Environmental Review: Transportation Impacts* (*SF Guidelines*), published by the City and County of San Francisco, Planning Department (July 1991).

A survey of the existing Exchange operations was conducted to determine the travel patterns of its workers.[7] Based on this survey, most workers arrive and depart outside the typical AM (7:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak periods. Approximately 75% arrive before 6:30 AM and depart before 3:30 PM. This is because exchange operations are interdependent with activities of the New York Exchange; therefore, Pacific Coast operating hours correspond to Eastern Standard Time hours of operation for similar East Coast institutions. Employment, rather than gross floor area, was used as the basis for estimating trip generation for the project, because employee density on the Pacific Exchange trading floors is substantially higher than for typical office uses. Gross floor area was, however, used to estimate trip generation for the project's retail component, as it would be typical retail space.

There has been some speculation that based on current national and international trends should securities trading go to 24-hour operation that the Pacific Exchange could perhaps operate on a 24-hour basis. It is speculative at this time to analyze such a scenario in great detail. However, if the Exchange were to operate on a 24-hour schedule, impacts would be expected to continue to occur off peak from the Downtown PM peak hour and would likely be even more dispersed over 24 hours. Therefore, transportation impacts would be expected to be less under such operations.

As proposed, the project would have a total of about 3,260 employees by the year 2010, the project build-out year. (There are about 1,500 employees currently.) At buildout, it is estimated that the project would therefore generate a total of approximately 11,235 daily person-trips, of which about 9,975 person-trips would be generated by the Exchange and related activities and 1,260 person-trips would be generated by the 8,400 gross square feet of retail space. During the area PM peak hour (generally between 4:30 and 5:30 PM), the project would generate about 443 person-trips, of which the Exchange and retail components would generate about 393 and 50 person-trips, respectively. As described previously, most person-trips generated by the Pacific Exchange uses would occur before the weekday PM peak hour. Table 2 shows the trip generation for the project.

TABLE 2
PROJECT PERSON-TRIP GENERATION

Proposed Land Use	Size/Other	Daily Person Trip Rate[a]	Daily Person-Trips	PM Peak Hour Person-Trips
Proposed Project:				
Pacific Exchange	3,259 employees	3.06 trips/employee	9,973	393
Retail	8,400 gsf	150.00 trips/1,000 gsf	1,260	50
Total (Rounded)			11,230	440

Notes:
gsf - gross square feet
a. Daily person-trip generation rates obtained from the City and County of San Francisco, Guidelines for Environmental Review: Transportation Impacts, July 1991, Appendix 1.
Source: Korve Engineering

The person-trips generated by the proposed project were assigned to travel modes in order to determine the number of vehicle and transit trips that would be generated by the project (see Table 3). The project would generate a total of about 90 weekday PM peak hour vehicle trips, of which most would be outbound (108 person-trips ÷ 1.2 persons/vehicle = 87 trips).[8] The trip distribution for the project is based on data in the *Pacific Exchange Transportation Study* (Korve, July 1998). Most of the trips generated by the Pacific Exchange would be to/from areas within San Francisco and the East Bay, with decreasing percentages from the North and South Bays. About 27% of the trips would be within San Francisco, 30% would be to/from the East Bay, 24% to/from the North Bay, 17% to/from the South Bay, and 2% to/from other destinations outside the Bay Area.

EXISTING PLUS PROJECT CONDITIONS

Traffic Impacts

The intersection analysis assesses potential traffic impacts generated by the addition of project-related traffic to existing conditions. Intersection impacts were evaluated for the

TABLE 3
PROJECT PM PEAK-HOUR TRAVEL MODE

Travel Mode	Proposed Project (%)	PM Peak Hour Trips
Auto	24.6%	108
Transit	56.4%	248
Walk	11.7%	51
Other	7.3%	32
Total	100.0%	440

Source: Korve Engineering

weekday PM peak hour conditions with traffic generated by the project added to existing traffic volumes. Table 5 presents the intersection LOS analyses. As shown in Table 4, project-related vehicle-trips would result in little or no change in average vehicle delay at the seven study intersections. All intersections would remain operating at the same service levels as under existing conditions (i.e., LOS E at Folsom Street/The Embarcadero, LOS F at Harrison Street/First Street, and LOS D or better at all other intersections).

Transit Impacts

The project would generate approximately 250 PM peak-hour transit trips (15 inbound and 235 outbound). Based on the project trip distribution, approximately 47% (or about 110) of these transit trips would use MUNI and the remaining 53% (or about 125) would use either BART, AC Transit, SamTrans, or Golden Gate Transit.

MUNI service capacity was analyzed in terms of a series of screenlines. The concept of screenlines is used to describe the magnitude of travel from or to the downtown area and its vicinity, and to compare estimated transit volumes to available capacities for each transit operator. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region.

TABLE 4
PM PEAK HOUR INTERSECTION LEVELS OF SERVICE /a/

	Existing		Existing Plus Proposed Project		Future Year 2015 Cumulative (with Existing Street Network)		Future Year 2015 Cumulative (with Transbay Street Network)	
Intersection	**Delay (sec/veh)**	**LOS [b]**	**Delay (sec/veh)**	**LOS [b]**	**Delay (sec/veh)**	**LOS [b]**	**Delay (sec/veh)**	**LOS [b]**
Folsom Street and Main Street	8.0	B	8.0	B	34.1	D	16.6	C
Folsom Street and Spear Street	7.9	B	8.2	B	7.7	B	7.7	B
Folsom Street and The Embarcadero	47.4	E	47.1	E	>60.0	F	>60.0	F
Howard Street and Main Street	8.9	B	8.9	B	44.2	E	40.5	E
Howard Street and Spear Street	7.9	B	7.9	B	8.0	B	8.1	B
Howard Street and The Embarcadero	30.1	D	30.1	D	25.2	D	29.9 [c]	D
Harrison Street and First Street	>60.0	F	>60.0	F	>60.0	F	>60.0	F

Notes:

a. The peak hour which occurs during the 4 p.m. to 6 p.m. peak period.

b. Level of Service determined from the *1985 Highway Capacity Manual (Updated 1994), Chapter 9.*

c. Under future Year 2015 conditions, The Embarcadero would be widened from two to three continuous lanes in the southbound direction, as part of the improvements proposed for the Embarcadero Freeway and Terminal Separator Structure project. Therefore, the average vehicle delay decreases at this intersection.

Source: Korve Engineering

Four screenlines have been established in San Francisco to analyze potential impacts of the proposed project on MUNI service: Northeast, Northwest, Southwest, and Southeast, and sub-corridors within each screenline. The sub-corridors by screenline are:

- Northeast:
  - Kearny/Stockton Corridor (15, 30, 30X, and 45)
  - All Other Lines (32, 41, 42, and 82)
- Northwest:
  - Geary Corridor (38, 38L, 38AX, and 38BX)
  - All Other Lines (1, 1AX, 1BX, 2, 3, 4, 5, 21, 31, 31AX, 31BX, and 45)
- Southwest:
  - Subway Lines (K, L, M, and N)
  - All Other Lines (6, 7, 71, and F)
- Southeast:
  - Third Street Corridor (15)
  - Mission Street Corridor (14 and 14X)
  - All Other Lines (9, 9AX, 9BX, and J)

The screenline for each route reflects the Maximum Load Point for each MUNI line which crosses one of the screenlines. For this analysis, MUNI ridership measured at the four San Francisco screenlines and sub-corridors represents the peak direction of travel and patronage loads for the MUNI system which corresponds with the PM commute outbound direction from the vicinity of the project to other parts of the City. All screenlines were found to have the capacity to accommodate additional passengers. Capacity utilization is based on MUNI's maximum load standard for each size of vehicle (i.e., passenger loads of 45,63,94, and 119 passengers per vehicle for 30-foot,40-foot, and 60-foot buses and LRVs, respectively). The capacity includes seated passengers as well as an appreciable number of standees per vehicle (standees may comprise an additional somewhere between 60 and 80 percent of seated passengers, depending on the specific transit vehicle configuration). That is, a rider may experience crowding on a transit vehicle considered to have available capacity, using this standard.

The project would increase the ridership at the screenlines in the outbound direction by about 110 riders (235 new transit trips less 125 destined to the East Bay, North Bay and South Bay). The analysis assumes that transit riders destined to the North Bay would walk to nearby Golden Gate Transit bus stops; to the East Bay, walk to either the Transbay Terminal or to BART; and to the Peninsula, walk to the Transbay Terminal for SamTrans service, walk to SamTrans bus stops along Mission Street, walk to BART for Daly City/Colma service, or walk to the E-Embarcadero line at Folsom Street and ride to the Caltrain Station at Fourth and Townsend Streets.

The addition of the 110 riders to the four MUNI transit screenlines would increase use at all screenlines from 70% of capacity under existing conditions to 71% of capacity with the project, or 1%, and to a maximum of 73% on any one screenline, and to a maximum of 84% on any one sub-corridor. This level of use would not exceed the MUNI service standard of 100% of capacity (seated plus standing). The additional project regional transit riders would be distributed among the many lines operating during the weekday PM peak commute hour. BART riders would be distributed among four BART lines to the East Bay and the San Francisco Daly City/Colma line (60 trips). AC Transit riders would be distributed among 33 Transbay routes to the East Bay (45 trips) Sam Trans riders would be distributed among nine bus lines to the South Bay (18 trips), and Golden Gate Transit riders would be distributed among 26 basic and commuter bus routes to the North Bay (17 trips). When distributed among these lines, the resulting additional transit trips from the project would be within the range of daily ridership fluctuations. Therefore, it is not anticipated that there would be measurable impacts on regional transit capacity due to the project.

Parking Impacts

The project would displace two existing surface public parking lots with 264 spaces. These spaces are approximately 91% occupied during the midday peak parking period.

The project would generate a parking demand for approximately 750 parking spaces. Based on the maximum proposed parking supply of 550 spaces, there would be a parking shortfall of about 200 spaces under the project.

Parking shortfalls relative to demand are not considered significant environmental impacts in the urban context of San Francisco. Parking deficits are an inconvenience to drivers, but not a significant physical impact on the environment. The City's Transit First policy encourages a shift from the personal automobile to public transit. Faced with parking shortages, drivers generally seek and find alternative parking facilities farther from their destination or shift modes of travel.

A queuing analysis reviewed whether vehicles entering the project garage from Spear Street would cause queues that would impede a travel lane on Spear Street. The entrance/exit ramp for the project would provide one lane inbound and one lane outbound. A ticket dispenser with gate control would be at the end of the ramp, approximately 70 feet from the street. Based on expected parking operations during the peak arrival hour, there would be a maximum queue length of three vehicles, or about 60 feet. The 70 feet of ramp length would thus accommodate the vehicle queues during the peak hour. The project would not be expected to obstruct the adjacent travel lane on Spear Street.

Pedestrian Impacts

The crosswalks at Folsom Street/Main Street and Folsom Street/Beale Street currently operate at LOS A. Given the low pedestrian traffic volumes at these intersections, the addition of project pedestrian traffic would not cause pedestrian conditions to reach unsatisfactory levels.

Loading Impacts

Based on the Design for Development document for the Rincon Point - South Beach Redevelopment Project Area, the proposed project would need to provide two off-street freight loading spaces for the 417,115 gsf of Pacific Exchange uses (no off-street loading spaces would be required for the 8,400 gsf of retail space).

If calculated according to San Francisco City Planning Code Section 152.1, the proposed project would need to provide four off-street freight loading spaces for the 417,115 gross square feet of Pacific Exchange uses (no off-street loading spaces would be required for the 8,400 gross square feet of retail space). Planning Code Section 154 (b) requires that the first space have a minimum length of 25 feet and a minimum width of 10 feet, while the remaining spaces must have a minimum length of 35 feet and a minimum width of 12 feet. Planning Code Section 153 (a) (6) states that a substitution of two service vehicle spaces (with minimum length of 20 feet and minimum width of 8 feet) for each required off-street freight loading space may be made, provided that 50% of the required number of spaces are provided for freight loading. The three freight loading spaces proposed with the project would exceed the Design for Development requirements by one space, and provide one less space than required by the Planning Code requirements.

The project would generate a demand for loading space to accommodate 4.8 delivery trucks during an average loading hour and 6.0 trucks during the peak loading hour, based on *San Francisco Planning Department Transportation Analysis Guidelines*. If the demand were for 4.8 (average) and 6.0 (peak) full-sized off-street freight loading spaces, it would create a shortfall of about 1.8 spaces during an average hour and 3.0 spaces during the peak loading hour (4.8 trucks - 3 spaces = 1.8 spaces) assuming that all deliveries would be made by large delivery trucks. However, based on current data from Pacific Exchange operations, the project is expected to generate loading space demand primarily for small trucks and vans.[9] Therefore, the three full-sized freight loading spaces provided could likely accommodate more than one smaller vehicle each at any one time, with additional small trucks and vans being accommodated as turnover occured within each hour. However, project loading space demand could create parking conflicts on adjacent streets. The shortfall could potentially cause some delivery vehicles to seek parking on the street, either within the metered spaces on Spear Street, or illegally within the red zone (Golden Gate Transit layover area) on Main Street or the designated vanpool parking on Folsom Street.

Construction Impacts

Construction would be expected to take approximately 31 months. Demolition, hazards remediation, and excavation activities would occur during Phase 1, which is anticipated to take about 2.5 months; foundation activities would occur during Phase 2, which would take about 3 months; construction of the structure and exterior activities would occur during Phase 3 for 9 months; core elements would take place during Phase 4, taking approximately 10 months (overlapping with Phase 3); and interior improvements would occur during Phase 5, taking about 13.5 months (overlapping with Phase 4).[10]

There would be approximately 32 trucks per day at the site during the peak construction period. Most construction truck activities would be expected to occur before and after the 7:00 to 9:00 AM peak period. The impact of construction truck traffic would be a temporary lessening of the capacities of streets due to the slower movement and larger turning radii of trucks. The reduction in capacity would slow movement of traffic, including MUNI buses (MUNI route 80X operates on Main Street next to the project site).

During the peak construction period, there would be approximately 175 construction workers at the site. This would result in a temporary parking demand by these workers. Off-site parking arrangements would be made by the project contractor to meet this temporary demand.

Construction staging would occur within the site, as well as on the sidewalks on Main, Spear, and Folsom Streets for the entire duration of the project. Where required by the

Department of Parking and Traffic, temporary pedestrian walkways would be constructed in the adjacent curb lanes to maintain pedestrian access. A pedestrian walkway within the parking lane on Spear Street would result in a temporary loss of seven metered on-street parking spaces. Since on-street parking in the area is generally full, some vehicles may need to park farther away, use off-street parking facilities, or change travel mode. Curb parking on the north side of Folsom Street on the project frontage is designated for seven commuter vanpool vehicles only. A pedestrian walkway constructed within this parking lane would result in a temporary loss of parking for vanpools, for about 24 months. While the vanpool parking spaces could be displaced by the project, the spaces most likely would be relocated within the area. The curb lane on the east side of Main Street is a red zone designated for Golden Gate Transit bus layover. A pedestrian walkway within this zone would temporarily (for about 24 months) eliminate the layover space. That red zone is layover parking for up to three Golden Gate Transit buses. Approximately 90 Golden Gate Transit buses are accommodated at the parking lot south of the project across Folsom Street during midday layover. The displacement of the Spear Street spaces would not be expected to disrupt Golden Gate Transit operations. The project sponsors would meet with Golden Gate Transit staff to develop a plan to accommodate those layover spaces during project construction.

The impact of construction truck traffic would be a temporary lessening of the capacities of streets due to the slower movement and larger turning radii of trucks. The reduction in capacity would slow movement of traffic, including MUNI buses. Lane blockage on Main Street due to lines of construction trucks, if it were to occur, would reduce the capacity of this street and interfere with the operation of transit vehicles. This reduction in capacity would be a temporary, short-term effect and would not be expected to occur on a daily basis during the 31-month construction period. The project sponsor would require that during the construction period, construction truck movement occur only between 9:00 AM and 3:30 PM or after 6:30 PM and before 7:00 AM or other times if approved by the Department of Parking and Traffic, to minimize peak hour traffic conflicts, including impacts on transit operations. The project sponsors and construction contractor(s) would meet with the Traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, MUNI, the Planning Department, and with the contractors for other developments in the vicinity that may become known (and could have concurrent construction activities) to determine feasible traffic mitigation measures to reduce traffic congestion, including transit disruption (for example, potential relocation of bus stops), and pedestrian circulation impacts during construction of the project. Construction effects would be intermittent and temporary during this construction period and are not considered significant.

VARIANTS

The transportation analysis evaluated impacts for two variants of the project, for a conservative analysis. The first variant assumes the building would be occupied by conventional downtown office uses instead of the Pacific Exchange-related activity. The second variant assumes the project would be built without parking compared to the 550-space (valet) parking garage proposed.

Office Use Variant

The Office Use variant would entail constructing the project as proposed to house conventional office space in the same building envelope. The building would not accommodate the Exchange or its Trading and Technology Center. The space allocated to the multi-story Trading and Technology Center would be replaced with office space, and because office space would require a smaller floor-to-ceiling height than portions of the Trading and Technology Center, this variant would result in about 27,000 additional gross square feet (an additional complete floor). (See Figure 8, p. 26.) Because of the relatively high concentration of Exchange-related employees in floor trading activities with the project, employment for office use-only would be less than that with the Exchange-related uses and the Trading and Technology Center. This variant would accommodate about 1,790 employees, or about 1,470 fewer than the project.

With the Office-Use Variant, the number of daily vehicle, transit, and pedestrian person trips would be about 6,190, about 45% less than the 11,230 trips expected of the project. As discussed above, under Methodology, p. 81, and Table 2, p. 83, Exchange-related workers typically arrive and leave work at times related to the New York-based equities and options markets, and before most downtown workers. Office workers under this variant would be expected to exhibit more typical commute patterns. Therefore, during the PM peak hour, the Office-Use Variant would generate about 610 person-trips, about 37% more than the project's 440 peak-hour person-trips (see Table 2, p. 83).

While the project would generate about 90 vehicle-trips during the weekday PM peak hour, this variant would generate about 140 peak hour trips. The approximately 50 additional vehicle-trips generated by this variant during the PM peak hour would be dispersed throughout the area and would not likely result in any substantial impacts at study intersections. As with the proposed project, this variant would therefore result in little or no change to the average vehicle delays and LOS at nearby intersections. The greatest difference is that this variant would result in additional delays of 0.2 seconds per vehicle at Folsom and Spear Streets, compared to the project. (See Table 4, p. 85.) Intersection LOS would not be affected by this change, and this intersection would continue to operate at an acceptable LOS.

This variant would produce about 315 PM peak-hour transit trips, compared to 250 with the project, an increase of 37% due to the greater number of riders in the peak hour compared to the project. As with the project, those trips would be distributed over the four MUNI screenlines with minimal or no increases in the peak-hour capacity utilization. Capacity utilization would increase from 73% under existing conditions, to 74% with either the project or this variant.

The fewer overall employees with this variant would result in a parking demand of 510 spaces, and would result in a parking surplus of 40 spaces, compared to a deficit of about 200 spaces with the project. Truck loading effects would be similar to that of the project.

As with the proposed project, pedestrian impacts of this variant would not result in unsatisfactory pedestrian conditions at crosswalks at the project site.

No On-Site Parking Variant

With the No On-Site Parking Variant, the project would be developed as proposed but without a parking garage. (In the C-3 Districts [Planning Code Section 161(c)], parking is required for residential uses only, and is otherwise discouraged. The Rincon Point - South Beach Redevelopment Project Area Design for Development document is proposed to be amended to permit one parking space per 1,000 gsf of floor area of the Exchange facility, or about 425 spaces for the project.

As with the proposed project, this variant would generate about 90 vehicle-trips during the weekday PM peak hour. Unlike the proposed project, in which most of those vehicles would be entering and exiting the project parking garage, this variant would result in distribution of those vehicle trips throughout the local street network, to other parking facilities within the study area. That change in travel patterns would increase traffic at some intersections and decrease traffic at others. Nevertheless, the vehicle-trips generated by the variant during the PM peak hour would be dispersed throughout the area and would not likely result in any substantial impacts at study intersections. As with the proposed project, this variant would result in little or no change to the average vehicle delays and intersection LOS.

This variant would generate the same parking demand as the proposed project, about 750 spaces and, therefore, would have a parking shortfall of 750 parking spaces, representing approximately 13% of net parking supply of 6,120 spaces in the study area. This 750-space parking shortfall could not be accommodated at existing parking facilities. In relation to cumulative parking impacts, discussed below, the Variant would result in a future study area shortfall of about 2,020 parking spaces, compared to 1,470 spaces with the parking proposal as part of the project. Persons intending to park in the study area would find limited available parking, extended search times for unoccupied parking spaces and lengthened parking queues. Those persons not accommodated within the study area would need to park father away or shift to alternative travel modes.

Pedestrian, and loading impacts would be the same with this variant as with the project. Transit demand during the rush-hour would be somewhat higher with this variant, if the lack of parking increases the mode shift to transit. This would not be substantial difference.

FUTURE (YEAR 2015) CUMULATIVE (INCLUDING THE PROPOSED PROJECT)

Cumulative Traffic Impacts

To determine the cumulative impact of project-related traffic on the street system it is first necessary to establish the background traffic conditions for the target year for the project. The development of future year 2015 conditions is based on the Metropolitan Transportation Commission (MTC) regional travel demand model, which is typically used to obtain estimates of growth in San Francisco and the nine-county Bay Area. The model is able to quantify shifts in travel patterns related to changes in roadway configurations, changes in land uses, as well as changes in modal split due to anticipated improvements to transit access, and accounts for other factors such as traffic congestion and parking costs.

The most recent MTC travel demand estimates incorporate the Association of Bay Area Governments (ABAG) *Projections '96* land use and socioeconomic database. These projections do not include the most recent development plans for a number of areas within the City of San Francisco, including the following: Hunters Point Shipyard Reuse, Mid-Market Redevelopment Area, Mission Bay Development, Presidio Reuse, Transbay Terminal Concept Plan, Bayview-Hunters Point Redevelopment, and Treasure Island Naval Station Reuse. The ABAG Projections '96 database was, therefore, adjusted to reflect the amount of development that would be anticipated for each of the above-cited projects by 2015. Those adjusted estimates provide the basis for year 2015 traffic conditions in this analysis.

Intersection impacts for future year 2015 cumulative traffic conditions were analyzed for two different scenarios: one scenario assumes the existing street network with intersection and roadway improvements proposed as part of the Preferred Alternative in the *Alternatives to Replacement of the Embarcadero Freeway and Terminal Separator Structure FEIS/FEIR* [11] (*Mid-Embarcadero FEIR*), and the other scenario assumes a street network with intersection and roadway improvements analyzed for the Concept Plan Alternative in the *Transbay Area Plan Transportation Study*.[12] (See Land Use, Plans and Zoning, pp. 38-40, for a discussion of Transbay area planning.)

The specific roadway improvements approved in the *Mid-Embarcadero FEIR* that would affect traffic circulation in the immediate vicinity of the Proposed Project include the future realignment of the Fremont Street Bay Bridge off-ramp from its current location (mid-block on Fremont Street, between Howard and Folsom Streets) to the intersection of Fremont Street/Folsom Street; and the completion of widening of The Embarcadero, between Howard Street and Broadway, to six continuous lanes (three in each direction) during the peak periods.

Additional year 2015 roadway improvements analyzed in the *Transbay Area Plan Transportation Study* would include converting Folsom Street, between Second and Main Streets, to two-way operations (this segment of Folsom Street is currently one-way eastbound) with three eastbound lanes and one westbound lane. In addition, Main and Beale Streets would carry bus traffic in contra flow transit-only lanes (these would operate against the existing one-way traffic flow). Main Street, which currently has three northbound lanes in the project vicinity, would have two northbound traffic lanes and one southbound lane for buses only. Beale Street, which currently has three southbound lanes in the project vicinity, would have two southbound traffic lanes and one northbound lane for buses only. Future year 2015 cumulative traffic volumes were obtained from the *Transbay Area Plan Transportation Study*.

Table 4, p. 85, presents the results of the future year 2015 cumulative intersection LOS analysis for weekday PM peak hour conditions. As shown in the table, future year 2015 traffic conditions would cause the intersection of Folsom Street/Main Street to worsen from LOS B under existing conditions to LOS D with the existing street network, under Mid-Embarcadero/TSS roadway assumptions. With the Transbay study road network, the Folsom/Main intersection would operate at LOS C. In addition, under both the existing street network and the Transbay street network, year 2015 traffic would cause the following intersections to change as follows: Folsom Street/The Embarcadero (E to F), Howard Street/Main Street (B to E), and Harrison Street/First Street (remains at LOS F) during the weekday PM peak hour. The LOS E or F conditions at these intersections would be the result of existing or future cumulative traffic, and not the result of traffic generated by the project only. Project-related traffic would cause little or no change in average vehicle delays. As described above, all other study intersections would operate at acceptable conditions, LOS D or better under future year 2015 conditions.[13]

The projected growth in MUNI ridership by the year 2015 is expected to exceed the operating capacity for MUNI Northeast, Northwest, and Southwest screenlines. Specifically, future cumulative ridership would exceed the operating capacities on most of the sub-corridors, except the Geary Corridor of the Northwest screenline; the Third Street Corridor and Mission Corridor of the Southeast screenline; and the “All Other Lines” of the Northeast screenline. The project contribution to the cumulative transit ridership on MUNI would be less than 1%. Similarly, the project’s contribution to the cumulative growth on the regional transit carriers that serve the project (i.e., BART, AC Transit, SamTrans, and Golden Gate Transit) would be less than 1%. The project alone would not substantially affect the peak-hour capacity conditions on local and regional transit services.

Cumulative Parking Impacts

The parking analysis assumes that, by year 2015, development would displace some of the surface parking lots located on the remnant or irregularly shaped parcels that became vacant after the 1989 Loma Prieta earthquake and the demolition of the Terminal Separator Structure and the Embarcadero Freeway. This includes future development on sites along Folsom Street on parcels that would be used by Caltrans as staging areas for the Bay Bridge Retrofit project.[14]

There are approximately 6,120 off-street parking spaces available in the study area, 5,280 spaces with current peak occupancy. When the project is completed, there would be a net parking supply of about 4,655 spaces due to development in the study area that would displace off-street spaces (i.e., the project, the approved Gap building, the approved 300 Howard Street project, and the Bay Bridge Approaches Retrofit). Thus, future parking demand (not including parking demand generated by the Pacific Exchange) would exceed the parking supply by about 35%, or 1,625 spaces (5,280 - 4,655 = 1,625). With the project parking demand for 750 spaces, there would then be a shortfall of about 2,375 spaces in the study area. As discussed below, the project and other development would add spaces as well.

Future development, including the project noted above would eliminate approximately 2,510 parking spaces in the study area. The 2,510 spaces comprise over 40% of the 6,120 existing spaces. Excluding the project, other development would add at least 490 spaces in the study area, for a net loss of about 2,020 spaces and a future study area supply of about 4,100 available spaces. With the project's 550 spaces, a total of 1,040 spaces would be added, for a net loss of 1,470 spaces and a future supply of about 4,650 spaces. It should be noted that as individual projects are ultimately developed, the parking supply could be different than assumed in this analysis.

Persons intending to park in the study area would find constrained parking conditions, would have to park farther from their destination, including parking outside the study area, or switch travel modes to transit, carpool, or other forms of travel.

Cumulative Loading Impacts

In March 1996, the Board of Supervisors recommended a site for a new bus terminal, to replace the Transbay Terminal, [bounded by Main and Beale Streets and extending half a block to the north and south of Howard Street], west of the Exchange project site. It is not clear at present how that plan would proceed. Replacement of the terminal at its existing site is also being considered. Thus, the design configuration and location of such a new terminal has not been established. If the new Transbay Terminal were built on the Folsom-Main-Beale-Howard block as has also been considered, trucks backing into the project loading dock on Main Street could occasionally conflict with vehicles entering and exiting the terminal, depending upon actual location of bus terminal access. It is not anticipated that there would be frequent delivery by large-sized trucks, and therefore, maneuvering times for project deliveries would not be expected to cause substantial delay to vehicles entering/exiting the new bus terminal.

All other impacts would be the same under cumulative conditions as previously discussed under existing-plus-project.

Cumulative Construction Impacts

Construction activities for the project could occur concurrently with other projects in the vicinity. For example, the approved Gap headquarters building will be constructed to the east of the project site, on the block bounded by Howard, Steuart, Folsom and Spear Streets. The Bay Bridge Approaches Retrofit project is expected to begin in 1999. As described previously, several Caltrans-owned parcels adjacent to the project site would be used for construction staging. These include the three blocks directly west of the project site, bounded by First, Main, Howard, and Folsom Streets. During the retrofit period, transit, traffic, and parking impacts would result from partial street closures and increase in trucks construction traffic. Buses running on surface streets would be subject to traffic delays on a temporary and intermittent basis.

The construction periods of each of these projects and their impacts would differ depending on the location and scale of the project. As discussed on p. 91, the project sponsor would work with the Department of Parking and Traffic, Caltrans and other project contractors to develop plans to address traffic control and pedestrian movements on streets in the construction area.

NOTES: Transportation

1. Pacific Exchange Transportation Study Report, July 1998, Korve Engineering, Inc.

2. Class II as defined in the *San Francisco General Plan Transportation Element*, with bike lanes and signs.

3. Transbay Area Plan Transportation Study, Final Report, April 1998, Korve Engineering, Inc. This report is available for public review at the Planning Department, 1660 Mission Street, 5th Floor.

4. The parking inventory and occupancy analysis is based on existing parking surveys, studies and Environmental Impact Reports (EIRs) conducted during the last five years. These sources include the *San Francisco Giants Ballpark at China Basin Final EIR* 96.176E (June 1997) which includes a parking study area of blocks south of Howard Street, and the *Transportation Technical Report for the Rincon Sports and Entertainment Center* (February 12, 1996). This information was supplemented by a field survey of selected parking facilities conducted by Pittman & Hames Associates in January 1998. For *off-street* parking, the parking analysis for this EIR considers occupancy for those periods when existing data were available. Therefore, occupancy is analyzed for the midday (12:00 to 3:30 PM) period, which is representative of the peak parking demand period of downtown retail and office land uses.

5. San Francisco Planning Department, *San Francisco Giants Ballpark at China Basin Final Environmental Impact Report* (Planning Department File No. 96.176E, State Clearinghouse No. 96102056), June 1997.

6. According to Korve, July 1998, The unoccupied off-street parking space estimate was based on the "worst-case" (highest) utilization rate, which is multiplied by the number of parking spaces to determine the number of available spaces in each block. The available spaces were then aggregated for all blocks in the study area.

7. Pittman & Hames Associates, *Pacific Exchange Parking Study*, March 1998. This report is available for public review at the Planning Department, 1660 Mission Street.

8. Pittman & Hames Associates, *Pacific Exchange Parking Study,* March 1998.

9. Anne Bomford, Director of General Services, Pacific Exchange, memorandum to Michael Rice, EIP Associates, May 1, 1998. This memorandum is on file and available for public review at the Planning Department, 1660 Mission Street.

10. Rich Lamb, Webcor Builders, memorandum to Douglas Thomas, Thomas Realty Advisors, February 20, 1998.

11. San Francisco Planning Department and Federal Highway Administration, *Alternatives to Replacement of the Embarcadero Freeway and Terminal Separator Structure Final Environmental Impact Statement/Environmental Impact Report* (Planning Department File No. 92.202E & 94.060E, State Clearinghouse No. 92083065), September 1996.

12. Transbay Area Plan Transportation Study, Final Report, April 1998, Korve Engineering, Inc.

13. Pacific Exchange Transportation Study, Report, March 1998, Korve Engineering, Inc.

14. Information regarding the Transbay Area is based on discussion in the *Transbay Area Plan, Land Use Issues and Opportunities* document prepared by the San Francisco Planning Department and the San Francisco Redevelopment Agency, June 1996.

E. AIR QUALITY

SETTING

Air quality is regulated at the federal, state, and local levels. A series of laws and regulations provide a basis for air pollutant control efforts. The major controls focus on criteria air pollutants, pollutants for which ambient standards have been established.

Based on the authority of the federal Clean Air Act, as amended, and the California Clean Air Act, federal and state regulatory agencies set upper limits on airborne concentrations of ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and small-diameter particulate matter (PM_{10}). These pollutants are commonly referred to as Criteria Air Pollutants. Appendix D presents a description of criteria air pollutants and their effects. The ambient air quality standards are designed to protect segments of the population most susceptible to the pollutants' adverse effects (e.g., the very young, the elderly, people weak from illness or disease, and persons doing heavy work or exercise). The Bay Area Air Quality Management District (BAAQMD) is primarily responsible for planning, implementing, and enforcing federal and state ambient air quality standards in the Bay Area. Current BAAQMD plans for air quality improvement include the Ozone and Carbon Monoxide Attainment/Maintenance Plans, which address federal requirements[1], and BAAQMD's *1997 Clean Air Plan.*[2]

The BAAQMD compiled inventories and projections of CO, ROG (Reactive Organic Gases, precursors of ozone), NO_2, SO_2, and PM_{10} emissions for the major pollutant sources in the Bay Area for the years 1995, 2000, and 2010. Table 5 presents a summary of the emissions inventory and trends of air pollutants for the Bay Area. The substantial reductions apparent in the ROG and CO emissions from 1995 to 2000 are attributable to the stringent emission controls that have been, or will be, imposed on motor vehicles and stationary sources.

TABLE 5
BAY AREA CRITERIA POLLUTANT EMISSIONS INVENTORY AND PROJECTIONS
(Tons/Day - Annual Average)

	CO	ROG[a]	NO_2	SO_2	PM_{10}[b]
1995					
Total Emissions	2,425	535	454	102	462
Motor Vehicle Emissions	1,598	242	200	10	321
(Motor Vehicles' Percent of Total)	(66%)	(45%)	(44%)	(10%)	(70%)
2000					
Total Emissions	1,963	464	441	107	501
Motor Vehicle Emissions	1,108	166	171	10	355
(Motor Vehicles' Percent of Total)	(56%)	(36%)	(39%)	(9%)	(71%)
2010					
Total Emissions	1,600	406	449	115	582
Motor Vehicle Emissions	697	88	161	12	427
(Motor Vehicles' Percent of Total)	(44%)	(22%)	(36%)	(10%)	(73%)

Notes:

a. Reactive organic gases, precursors of ozone (excluding emissions from natural vegetation).
b. Including entrained road dust. (Projections are based on the Base Year 1990 Air District Emission Inventory.)

Source: Bay Area Air Quality Management District and Association of Bay Area Governments, *Improving Air Quality Through Local Plans & Programs*, October 1994.

PM_{10} is expected to increase, mostly due to the growth in motor vehicle travel. SO_2 is also expected to increase due to increased motor vehicle travel.

The BAAQMD emissions projections assume the following:

- Population, housing, employment, economic growth, and land use will increase as regionally forecast.[3]
- Cars will become cleaner, as required by California regulations.
- The recently enhanced "Smog Check" program will continue.
- Controls on industry and business will continue.
- Current transportation control measures will continue.

Both the federal Clean Air Act and the California Clean Air Act require that the California Air Resources Board designate as "non-attainment areas" portions of the state where federal or state ambient air quality standards are not met. The nine-county San Francisco Bay Area Air Basin has historically recorded violations of federal and state ambient air quality standards for ozone, CO, and PM_{10}. Since the early 1970's, substantial progress has been made toward controlling these pollutants. In 1995, the U.S. Environmental Protection Agency designated the Bay Area as an attainment area for the federal ozone standard[4], and is considering a request for a similar designation for the federal CO standard. The California Air Resources Board has designated the Bay Area as an attainment area for the state CO standard. However, the U.S. Environmental Protection Agency recently redesignated the Bay Area as a non-attainment area for ozone because of violations of the federal standard in 1995 and 1996. Occasional violations of state ozone and PM_{10} standards still persist, however, and although further air quality improvement is anticipated, attainment of state standards for these pollutants is not expected within the current 20-year planning horizon. In summary, the Bay Area is not in attainment for ozone under federal and state standards, and not in attainment of PM_{10} under state standards.

IMPACTS

Significance Criteria

BAAQMD has established thresholds for assessing project impacts on air quality.[5] These thresholds are commonly used to determine the significance of most air quality impacts under CEQA. To evaluate criteria air pollutants on a project level, construction-related emissions are typically considered less than significant if appropriate mitigation is employed to minimize particulate emissions. For operational impacts, emissions of 80 pounds per day of ROG, Nitrogen Oxides (NO_x), or PM_{10} are considered significant. Regarding CO emissions, these are considered in the context of roadside concentrations, since CO is a local pollutant that does not readily disperse. CO concentrations are measured against the state standard, which is more stringent than the federal standard. CO emissions in excess of the state standard are considered a significant impact. As discussed below, project-specific emissions of criteria pollutants would not be significant.

ANALYSIS METHODOLOGY

A computer model (URBEMIS5) was used to assess regional air quality impacts of project-related traffic. URBEMIS5 was developed by the California Air Resources Board as a planning tool to help in assessing the impacts of proposed projects. URBEMIS5 uses emission factors from EMFAC7F1.1 (a California Air Resources Board computer model) to assess the pollutants that would be generated by vehicle trips associated with the project land uses. Trip generation numbers were developed by land use category, and average trip lengths were calculated. The default values recommended in *BAAQMD CEQA Guidelines* for percentages of cold starts and trip speed were used. All pollutants except CO were analyzed under summer conditions using a temperature of 75 degrees Fahrenheit. CO was analyzed under winter conditions at 50 degrees Fahrenheit.

REGIONAL AIR QUALITY IMPACTS

The primary sources of criteria pollutants during project operation would be vehicular emissions from new traffic. Table 6 shows the project in relation to BAAQMD's significance thresholds for the evaluation of the ozone precursors (ROG and NO_x) and PM_{10}, and the threshold for further analysis of CO. Project-related emissions of ROG, NO_x and PM_{10} would be below BAAQMD significance thresholds and would result in a less than significant impact on regional air quality. CO emissions would be below the screening threshold of 550 pounds per day; therefore, no further analysis is required and the project would have less than a significant impact related to CO.

TABLE 6
ESTIMATED VEHICULAR EMISSIONS FROM PROJECT-RELATED TRAFFIC

Pollutant	BAAQMD Significance Threshold (lb/day)	Estimated Project Vehicular Emissions [a] (lb/day)
Reactive Organic Compounds (ROG)[b]	80	55
Nitrogen Oxides (NO_2)[b]	80	38
Small-Diameter Particulate Matter (PM_{10})[b]	80	4
Carbon Monoxide (CO)[c]	550	498

Notes:

a. Vehicular emissions are based on current-year (1998) emission factors. Emissions in future years are expected to decrease as a result of cleaner burning fuels and improved engine efficiency.

b. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.

c. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform the next level of micro-scale analysis.

Source: EIP Associates. Estimates are results of modeling using the California Air Resources Board's URBEMIS5 model.

CUMULATIVE IMPACTS

The project would contribute to a significant cumulative air quality impact in that it would incrementally add some emissions of criteria pollutants to the air basin. While this incremental contribution would not be significant in itself, it would nevertheless contribute to regional air quality conditions that are at times degraded, particularly with respect to levels of ozone.

NOTES: Air Quality

1. Bay Area Air Quality Management District (BAAQMD), Final San Francisco Bay Area Redesignation Request and Maintenance Plan for National Ozone Standards, September 1993; BAAQMD, Final San Francisco Bay Area Attainment Contingency Plan for National Carbon Monoxide Standards, September 1993.

2. BAAQMD, *1997 Clean Air Plan*, a supplement to the *1994 Clean Air Plan*, 1997 (adopted December 17, 1997).

3. BAAQMD, *1997 Clean Air Plan*, Volume IV, Appendix G. Source Inventory Description, p. G-5; BAAQMD *1997 Clean Air Plan*, Appendix D, p. D-1.

4. BAAQMD, *Ozone and Carbon Monoxide Attainment/Maintenance Plan*, 1993.

5. BAAQMD, *BAAQMD CEQA Guidelines*, 1996, p. 50.

F. GROWTH INDUCEMENT

The proposed project would include about 274,020 gross square feet of new office space, about 143,100 gsf in the Trading and Technology Center, about 8,400 gross square feet of retail space, and about 550 valet parking spaces. By about 2010 at project build-out (full occupancy by the Exchange), employment at the site would be about 3,260 employees. These would essentially be all new employees at the site, of which about 1,500 represent current employment related to Pacific Exchange operations in the Financial District, north of Market Street. Occupants of the project would include tenants at the current Pacific Exchange and approximately 550 members now located in the block bounded by Pine, Sansome, Bush, and Montgomery Streets. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project were fully leased, however, and the office space vacated north of Market for the project did not create permanent vacancies in other San Francisco office buildings, total employment in the City could increase by about 3,260 jobs due to the project. Additional jobs also would be supported indirectly in San Francisco through the multiplier effect.

It is expected that some downtown workers, including some in the project, would want to live in San Francisco. Employment growth, however, would not be reflected directly in increases in demand for housing and city services to residents, as some new jobs would be held by individuals who now live and work in the City; who live in the City but previously did not work or worked outside the City; who live in surrounding communities; or by those unable to afford or locate housing in the City. New downtown workers would also increase demand for housing in other parts of the Bay Area.

A net increase in downtown employment would increase the demand for local retail goods and services. The project would intensify this demand by increasing employment on the site. Increases in downtown employment would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In addition, it would be expected that a new Pacific Exchange in this part of downtown San

Francisco would encourage other financial services organizations to locate in the vicinity. These organizations could locate in existing office space in the vicinity, as space were available, or could possibly locate in new development on nearby land zoned C-3-O (SD) or C-3-S. It is possible that sites on former Embarcadero freeway lands would also become available for office or mixed-use development. Such new development in the project vicinity would be expected to be within the range of employment growth projected in the *San Francisco Cumulative Growth Scenario.*[1] The year 2015 projections in that document are used in the Transportation and Air Quality analyses in this EIR to account for future cumulative growth in the downtown.

The project and similar businesses that could follow together with other office development could have growth-inducing effects by demonstrating a market for office space in this area. This could thereby encourage similar development on lots, including smaller lots assembled for development currently occupied by low- and mid-rise buildings containing business support services. Such a demand could reflect a trend in growth of office activities and employment in the City. Increases in downtown office space and employment would contribute to continued growth of local and regional markets for housing, goods and services.

As noted above and in Chapter III, Section A, Land Use, Plans and Zoning, the project would shift an important San Francisco financial institution South of Market. The Downtown Plan and Planning Code envisioned and anticipated such a development shift to the South of Market, and the project vicinity was zoned for intensive development in the late 1980s. New development on underbuilt parcels in the South of Market would, in some measure, lessen development pressure for growth north of Market Street, including development pressure on sites containing buildings designated as architecturally significant, for preservation purposes.

The project would be consistent with existing and proposed land use plans for the project area and within employment growth projections for San Francisco. The project would be built in a developed urban area, and no expansion of the municipal infrastructure not already under consideration would be required to accommodate the new development and increased employment due to, or induced by, the project. For these reasons, the project would not have a significant growth-inducing impact.

NOTES: Growth Inducement

1. Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario*, Technical Memorandum, prepared for the San Francisco Redevelopment Agency, March 30, 1998.

IV. MITIGATION MEASURES PROPOSED TO MINIMIZE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the project. Some of these measures have been, or would be, adopted by the Exchange, its architects, or its other contractors and, therefore, are proposed as part of the project; some are under consideration. Implementation of some measures may be the responsibility of public agencies. Measures under consideration may be required by the City Planning Commission, the San Francisco Redevelopment Agency, or the Board of Supervisors as conditions of project approval, if the project were to be approved, as long as the measures fall within the jurisdiction of the particular approving body.

Each mitigation measure and its status is discussed below. All of these measures are from the Initial Study (see Appendix A, pp. A.34-A.38) and are proposed as part of the project.

A. NOISE

1. During pile driving, the Exchange would require project construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The Exchange would also require that contractors schedule pile driving activity for times of the day that would minimize disturbance to neighbors.

B. AIR QUALITY

2. The Exchange would require its contractors to (1) spray the site with water during demolition, excavation, and construction activities; (2) spray unpaved construction areas with water at least twice each day; (3) cover stockpiles of soil, sand, and other material; (4) cover trucks hauling debris, soils, sand, or other such material; and (5) sweep surrounding streets during demolition, excavation, and construction at least once each day to reduce particulate emissions.[1]

C. GEOLOGY

3. One or more geotechnical investigations by a California-licensed geotechnical engineer are included as part of the project. The Exchange and its contractors would follow the recommendations of the final geotechnical reports regarding any excavation and construction for the project. The Exchange would ensure that the construction contractor conducts a pre-construction survey of existing conditions and monitors the adjacent building for damage during construction, if recommended by the geotechnical engineer.

4. If dewatering were necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the soils report would determine whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the Exchange to perform this monitoring. Instruments would be used to monitor potential settlement and subsidence. If, in the judgement of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The Exchange would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the Exchange.

   If dewatering were necessary, the Exchange and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

5. The Exchange and its contractor would follow the geotechnical engineers' recommendations regarding installation of settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

D. WATER QUALITY

6. If dewatering were necessary, the Exchange would follow the recommendations of the geotechnical engineer or environmental remediation consultant, in consultation with the Bureau of Environmental Regulation and Management of the Department of Public Works, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system.

If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the Department of Public Works to reduce the amount of sediment entering the combined sewer system.

The Exchange would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the Department of Public Works.

E. HAZARDS

7. The Exchange would ensure that building surveys for asbestos, PCBs, lead, mercury, and other possible hazardous materials would be performed prior to the start of demolition. Any hazardous materials discovered would be abated according to local, state, and federal laws, regulations, and standards.

F. CULTURAL RESOURCES

8. Given the location and depth of excavation proposed, and the likelihood that archaeological resources would be encountered on the project site, the Exchange has agreed to retain the services of an archaeologist. The archaeologist would conduct a pre-excavation testing program to better determine the probability of finding cultural and historical remains. The testing program would use a series of mechanical, exploratory borings or trenches or other testing methods determined by the archaeologist to be appropriate.

   If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

   These additional measures would be implemented by the Exchange and could include a program of on-site monitoring of all site excavation, during which the archaeologist would record observations in a permanent log. The monitoring program, whether or not there are findings of significance, would result in a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency. During the monitoring program, the Exchange would designate one individual on site as its representative. This representative would have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources if they are encountered.

If evidence of cultural resources of potential significance were found during the monitoring program, the archaeologist would immediately notify the Environmental Review Officer, and the Exchange would halt any activities that the archaeologist and the Environmental Review Officer jointly determine could damage such cultural resources. Ground disturbing activities that could damage cultural resources would be suspended for a total maximum of four weeks over the course of construction.

After notifying the Environmental Review Officer, the archaeologist would prepare a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency, which would contain an assessment of the potential significance of the find and recommendations for what measure should be implemented to minimize potential effects on archaeological resources. Based on this report, the Environmental Review Officer would recommend specific additional measures to be implemented by the project sponsor. These additional measures could include a site security program, additional on-site investigations by the archaeologist, or documentation, preservation, and recovery of cultural material.

Finally, the archaeologist would prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration or recovery program is to be conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the Environmental Review Officer for review. Following approval by the Environmental Review Officer, copies of the final reports would be sent by the archaeologist directly to the Redevelopment Agency, President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. Three copies of the final archaeology reports would be submitted to the Office of Environmental Review, accompanied by copies of the transmittals documenting its distribution.

NOTES: Mitigation Measures

1. San Francisco Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that nonpotable water be used for dust control activities. Therefore, contractors would obtain reclaimed water from the San Francisco City Clean Water Program.

V. OTHER CEQA CONSIDERATIONS

A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

In accordance with Section 21100 (b)(2)(A) of the California Environmental Quality Act (CEQA), and Section 15126(b) of the State CEQA Guidelines, the purpose of this chapter is to identify significant impacts that could not be eliminated or reduced to an insignificant level by implementing mitigation measures included as part of the project or by other mitigation measures that could be implemented, identified in Chapter IV, Mitigation Measures, p. 111. This chapter is subject to final determination by the City Planning Commission and the San Francisco Redevelopment Agency Commission as part of their certification process for the EIR. If necessary, this chapter will be revised in the Final EIR to reflect the findings of the City Planning Commission and the Redevelopment Agency Commission.

No significant project-specific impacts have been identified. Whether or not the project is approved and constructed, traffic volumes and transit loadings in the site vicinity are projected to increase. These increases would lead to congestion, and potentially significant cumulative impacts may result. Cumulative increases in traffic congestion may in turn cause cumulative increases in criteria pollutants, and a degradation of air quality. The project would incrementally contribute to these potential cumulative effects.

B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Because the project includes proposed amendment of the *San Francisco General Plan* and the *Rincon Point-South Beach Redevelopment Plan*, Public Resources Code sections 21100(b)(2)(B) and 21100.1(a), and State CEQA Guidelines Sections 15126(e) and 15127 require that this Draft EIR identify significant irreversible environmental effects or changes that could occur if the proposed project were implemented.

The project would intensify development at the site consistent with development in San Francisco's urban environment. Although not irreversible, the effects of this development would be difficult to change in the short-run. The project would commit some future generations to the same land uses. Implementing the project would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and automobiles, and during demolition, construction and ongoing use of the site. Because the project would comply with California Code of Regulations Title 24, it would not use energy in a wasteful manner (see the discussion of Energy in the Initial Study, Appendix A). The consumption or destruction of other non-renewable or slowly renewable resources would also result during demolition, construction, occupancy, and use of the site. These resources include, but are not limited to, lumber, concrete, sand and gravel, asphalt, masonry, metals, and water. The project would also irreversibly use water and solid waste landfill resources.

However, the project would not involve a large commitment of those resources relative to supply, nor would it consume any of those resources wastefully.

VI. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the Exchange has rejected these alternatives in favor of the project. Regardless of the Exchange's reasons for rejection, the project decision-makers could approve an alternative instead of the proposed project, if decision-makers believe the alternative would be more appropriate for the site. Any of the alternatives, as well as the proposed project, could be implemented under City controls without the proposed amendment to Redevelopment Plans. The Redevelopment Plan and Design for Development are implementing mechanisms, while the development program and building envelope generate actual physical impacts. The project and alternatives would still result in the physical effects described in this EIR.

The following alternatives are evaluated in this chapter: No Project alternative; Trading and Technology Center with shorter tower alternative; and Main Street Oriented, Taller tower alternative. Other alternatives, including alternative sites, were considered and rejected by the Exchange, in favor of the proposed project. In addition, Section III.D., Transportation, analyzes two project variants (see pp. 92-95). The Office-Use Variant would accommodate conventional office space in the proposed bulding envelope. Because of the concentration of employees projected with Pacific Exchange operations, the Office-Use Variant would have fewer employees, but a greater number of peak-hour person-trips than with the project. The No On-Site Parking Variant would be the proposed project without the parking garage. That variant would increase the parking shortfall in the area.

A. ALTERNATIVE A: NO PROJECT

DESCRIPTION

The no project alternative would entail no change to the site. The proposed project would not be built. The existing small commercial buildings and surface parking lots would remain. The Downtown Plan would not be amended to include the project site in a C-3-O (SD) District and a 250-S Height and Bulk District. The San Francisco Redevelopment Agency and the City would not decide whether to amend and incorporate the project site into the *Rincon Point-South Beach Redevelopment Plan* and Design for Development document.

IMPACTS

If the no project alternative were implemented, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would be generally as described in the environmental setting sections of Chapter III. Land use, site views, and shadow and wind conditions would not change. Future transportation and air quality conditions described as base conditions with cumulative development would occur (see Chapter III, p. 106), but without the project. Therefore, this alternative would not contribute to cumulative transportation and air quality impacts. Because a portion of the site is zoned for office and office support uses, that portion could, given current demand for office space, be developed in the future under the existing C-3-S use district controls, with a smaller development of up to about 125,000 gross square feet (at a 5:1 FAR). The portion of the site presently zoned P for public use could be developed under P use district controls, or could be rezoned for private development; the remaining northerly portion of the block not including the site is currently zoned C-3-O (SD).

REASONS FOR REJECTION

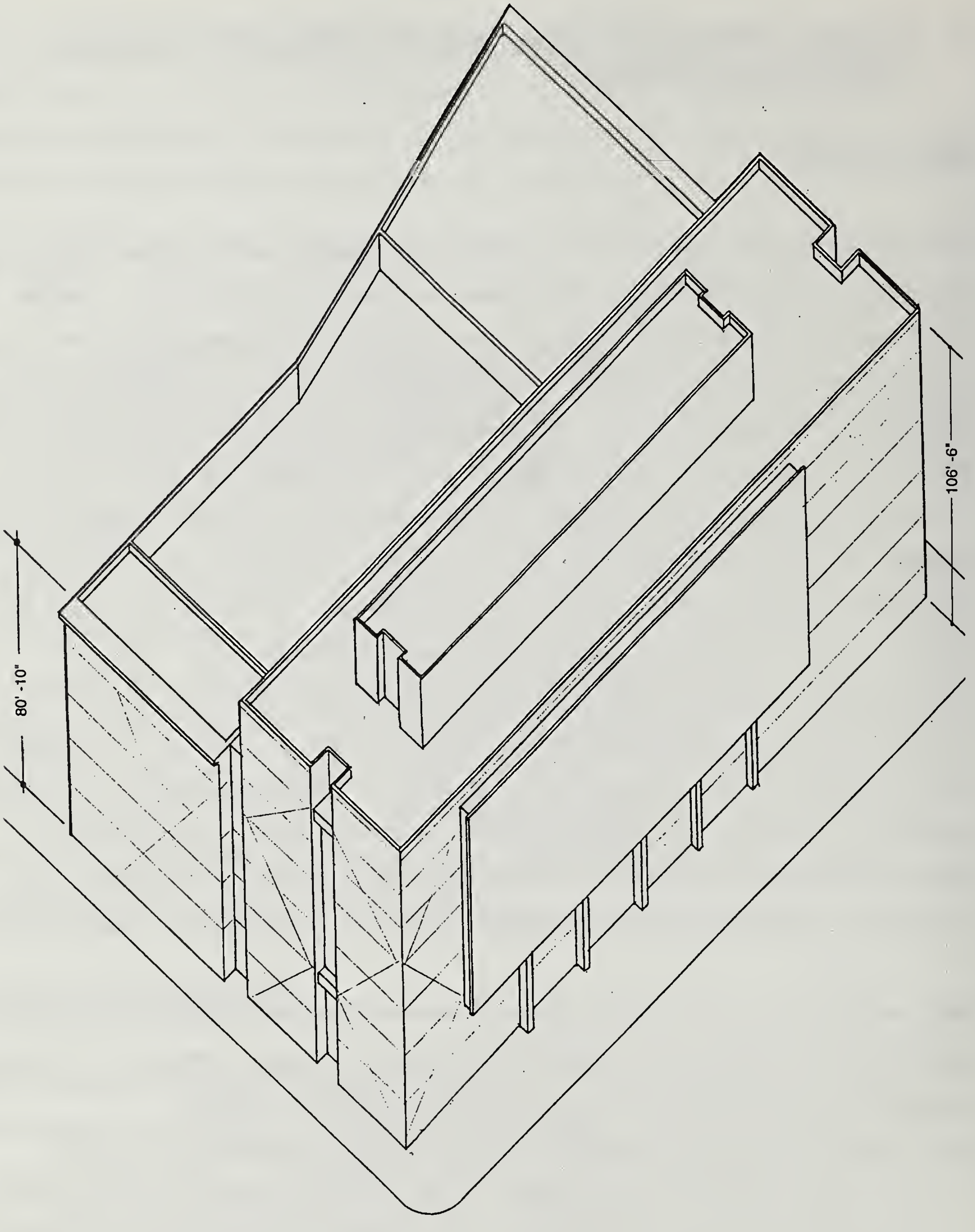
The Exchange has rejected this alternative because it would not achieve its objectives of consolidating its operations in one place as an essential facility and providing sufficient space for the Exchange to grow. The Exchange's current buildings are not an essential facility in terms of their ability to function after a disaster. This alternative would not achieve Redevelopment Agency objectives, to consolidate irregularly-shaped parcels with blighted conditions, and to foster redevelopment of the site as a site for the Pacific Exchange and the parking garage.

B. ALTERNATIVE B: TRADING AND TECHNOLOGY CENTER, AND SHORTER TOWER

DESCRIPTION

The shorter tower alternative would accommodate the Trading and Technology Center, but would not provide office space for all Exchange members and clearing firms. A shorter tower would rise two levels above the five-story Trading and Technology Center for a total of seven floors, compared to 17 floors as proposed with the project. The building would be about 100 feet tall (see Figure 21). With this alternative, the Downtown Plan of the General Plan would be amended to redesignate this site from the existing C-3-S and P districts to a C-3-O (SD) District (as with the project); the site would remain in a 200-S Height and Bulk District. As presented in Table 7, the floor area devoted to the Trading and Technology Center and retail uses would remain the same (143,100 gsf), and 45,700 gross square feet would be offices, compared to 274,000 gross square feet with the project. With this alternative, the Exchange Facility would contain 197,200 gross square feet, instead of the 425,550 gross square feet proposed with the project. As defined under the City Planning Code, this alternative would have a FAR of about 3.5:1, excluding parking uses, compared to about 7.8:1 FAR with the proposed project. As with the project, the San Francisco Redevelopment Agency and the City would consider the amendment of the *Rincon Point-South Beach Redevelopment Plan* and Design for Development document to include the site.

While employees of both the Exchange and its member firms would occupy the Trading and Technology Center (floors 1-5) as with the project, only Exchange employees would occupy the shorter tower. Therefore, this alternative would include an employee population of about 2,890, compared to the 3,260 employees projected to occupy the proposed project by 2010. All other aspects of this alternative would be the same as those of the project. This alternative is evaluated, in part, to determine how reducing the building size and height would affect potential physical impacts, compared to impacts of the project.



Source: Skidmore, Owings & Merrill

EIP

Alternative B: Axonometric View of Shorter Tower Alternative Figure 21
Pacific Exchange EIR

TABLE 7
COMPARISON OF PROJECT AND SHORTER TOWER ALTERNATIVE

	Project	Shorter Tower Alternative
Office Space (gsf)	274,000	45,700
Retail Space (gsf)	8,400[a]	8,400[a]
Trading and Technology Center Space (gsf)	143,100	143,100
Exchange Facility Space (gsf)	**425,500**	**197,200**
Parking Garage (gsf)	160,350	160,350
Total Space (gsf)	**585,850**	**357,550**
Floor Area Ratio (FAR)	7.8:1	3.5:1
Employee Population	3,260	2,890

Notes:
gsf - gross square feet

[a] Of the 8,400 occupied square feet of retail space, 3,400 occupied square feet would count toward floor area (if City Planning Code controls were applied).

Source: Pacific Exchange; Skidmore, Owings & Merrill

IMPACTS

The shorter tower alternative would change the intensity of land use at the site and the character of the block bounded by Howard, Folsom, Main, and Spear Streets. The nature of the activities associated with the Exchange, and any development that would be attracted to the area because of its presence, would serve to expand the Financial District south of Market Street as with the project, by some unknown amount.

This alternative would change the visual character of the area, as with the project. The shorter tower would be visible from nearby viewpoints on Folsom, Main, and Spear Streets. This alternative would be about one-half the height of the project, and generally shorter than the three existing buildings on the Howard-Folsom-Main-Spear block, which range from about 80 feet to about 240 feet in height. The alternative, with its 96-foot-tall tower, would also be shorter than the 287-foot approved Gap building east of the site. From The

Embarcadero and Herb Caen Way at Folsom Street toward the west, the Gap building will be prominent in the foreground, as with the project. While the project would be prominent in near views, it would be less noticeable in mid- to long-range views, than the project.

This roughly 100-foot-tall alternative would have fewer shadow effects than the project. Overall, the area shaded by this alternative would be about one-half of that of the proposed project. This alternative would shade the open space at the 221 Main Street building in morning hours, to a lesser extent than with the project. This alternative would not shade the approved Rincon Point Park at 3:00 p.m. on December 21, compared to the project, which would shade a strip of the park at that time.

Wind tunnel tests for the project included a test for this alternative. Like the proposed project, this alternative would not result in hazardous wind conditions. Table 2 of Appendix B presents wind results for the project and this alternative. Wind speeds at 28 of the 35 study locations with this alternative would be within 2 miles per hour of those for the project. The shorter tower would increase wind speeds by up to 3 miles per hour more than the project would at two locations along the west side of Spear Street, south of Folsom Street. Wind speeds would be 3 to 4 miles per hour less than with the project at five locations, primarily on Spear Street between the project site and the approved Gap building site. The project would increase the number of locations exceeding the pedestrian comfort criterion from 14 to 22; this alternative would increase the number of locations by one, from 14 to 15, 7 fewer than the project. This 15th location would be on the west side of Main Street, north of the project site. The combination of the Gap building with this alternative would cause results similar to those for the alternative by itself, varying less than 2 miles per hour from the results without the Gap building at 30 of the 35 test locations. Wind speeds with this alternative and the Gap building would be within 2 miles per hour of those for the project with the Gap building, at 26 of the 35 study locations. Therefore, wind effects for the alternative would be less than with the project.

The smaller amount of floor area and employment with this alternative compared to the project would result in less effect on intersection levels of service, transit demand, and pedestrian conditions. Total daily vehicle, transit, and pedestrian person trip volumes would be about 11% less than with the project. Like the project, which would not have significant project-specific impacts related to levels of service, transit, and pedestrian conditions, these impacts would not be significant and would be even less than with the project. Like the project, the alternative would contribute to cumulative transportation impacts that would be significant. This alternative would have mid-day parking demand of 670 spaces and would result in a parking deficit of 120 spaces, compared to a deficit of about 200 with the project. This alternative would have two to three off-street loading spaces and would meet loading space demand, as with the project.

As with the project, this alternative would increase emissions of reactive organic gases, nitrogen oxides, particulates, and carbon monoxide in the region. However, because this alternative would result in about 11% fewer person trips than the project, it would result in 11% fewer emissions. Like the project, therefore, it would not exceed project significance thresholds determined by the Bay Area Air Quality Management District; its impacts would be correspondingly less, as noted. Because this alternative would generate the fewest vehicle-trips of the project and alternatives reviewed in this EIR, Alternative B, combined with the No On-Site Parking Variant, would be considered the environmentally superior alternative. This alternative would contribute less to cumulative transportation and air quality effects, identified as significant effects in Section V.A, p. 115, above, although those cumulative effects would still occur.

REASONS FOR REJECTION

The Exchange has rejected this alternative because it would not achieve its objective of consolidating operations in one place, including provision of functional space for the Trading and Technology Center, Exchange members, and clearing firms. According to the project sponsor (the Exchange), this alterative would not permit the clearing firms to locate in close proximity to the trading floors, which the Exchange regards as critical to its continued success; and, unlike the project, this alternative would not house the clearing firms in an essential facility, thereby threatening trading operations in the event of a major earthquake or major power failure resulting from another cause.

C. ALTERNATIVE C: MAIN STREET ORIENTATION, TALLER TOWER

DESCRIPTION

Initially, the Exchange, its architects and its structural engineers believed that one structure including the Trading and Technology Center and office tower would be technologically and economically infeasible, and that the Trading and Technology Center and the office component of the Exchange Facility would have to be separate, adjacent structures. Consequently, during schematic design of the project, the Exchange considered a design alternative with an office tower oriented to the Main Street frontage, compared to the Folsom Street orientation of the proposed office tower. The Trading and Technology Center would be constructed on the remainder of the site between the Main Street tower and Spear Street. Because the Main Street frontage of the project site is about 180 feet, compared to 275 feet for the Folsom Street frontage, and because, under this alternative, the tower would not bridge the trading floor, this alternative would have a taller, free-standing 21-story, 282-foot (to the roof) tower, compared to a 17-story, 234-foot tower with the project. Floor area and uses (including the parking garage) would be the same as with the project. With this alternative, the General Plan would be amended to include the project site in a 300-S Height and Bulk District, compared to a 250-S District proposed with the project.

IMPACTS

With the same uses and floor area, this alternative would have the same effects on land use, transportation, and air quality as the project would: the alternative would extend high-rise office development to this area of the South of Market. Like the project, it would not have substantial adverse project-specific effects on traffic, transit, and pedestrian conditions. Like the project, it would contribute to cumulative transportation impacts that would be significant. The alternative would contribute to the same parking shortfall in the study area as the project, and would contribute to cumulative air quality effects that would be significant.

The taller tower of this alternative would be visible from nearby locations on Folsom, Spear, and Main Streets, and would be about 30 feet taller than the adjacent 221 Main Street building. The taller tower of this alternative would be about as wide as the Main Street elevation of the project tower; the Folsom elevation could be about half as wide. It would be of similar height as the approved, 287-foot Gap building east of the project site. It would be more visible in the mid- and long-range views than the project. The orientation of the tower with this alternative would have a narrower profile as seen from Folsom Street directly to the south. From Folsom Street west of the project site, or from Main Street just north or south of Folsom, the tower would be more prominent than the proposed project design.

The greater height with this alternative would create correspondingly longer shadows. However, like the project it would not shade open space under the jurisdiction of the Recreation and Park Department. This alternative would add somewhat more shade to the planned Rincon Point Park east of the project site, during afternoon hours in late fall and winter months. Street-level wind effects would be expected to differ little from those with the proposed project. As with the project, there would be an increase of locations at which the pedestrian comfort criterion would be exceeded. These additional locations could be shifted somewhat from those of the project. The alternative would not be expected to cause exceedance of the hazardous wind criterion.

REASONS FOR REJECTION

The Exchange rejected this alternative because, while it would achieve project objectives, a greater number of smaller floors would result in less efficient space in the tower and greater construction costs and the Exchange believes this alternative would be less economical to build as an essential facility. The project sponsor also believes that the orientation of the trading room and tower along Folsom Street would limit views of windowless areas. The alternative would have such windowless areas visible from Folsom Street.

D. ALTERNATIVE SITES CONSIDERED AND REJECTED

During development of the project, the Exchange considered a proposal to renovate the existing seven-story building at 633 Folsom Street (on the south side, near Second Street) to meet the office needs of members and clearing firms and to construct a new seven-story building on its adjacent surface parking lot for the Trading and Technology Center and other Exchange space. The project sponsor concluded this proposal would not meet the respective needs of the project in an economically feasible way.

The Exchange also considered a proposal to renovate a portion of the San Francisco Fashion Center building at Eighth and Townsend Streets. The Exchange concluded it would not be economically feasible to renovate the building to provide the Exchange with an essential facility.

No other sites have been identified within proximity to downtown San Francisco where the project could be constructed, the project sponsors' objectives could be met, and the project's contribution to cumulatively significant effects would be eliminated.

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San Francisco Business Times
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Bill Shiffman
Associated Press
1390 Market Street, Suite 318
San Francisco, CA 94102

The Sun Reporter
1366 Turk Street
San Francisco, CA 94115

LIBRARIES

Stanford University Libraries
Jonsson Library of Government Documents
State & Local Documents Division
Stanford, CA 94305

Government Publications Department
San Francisco State University
1630 Holloway Avenue
San Francisco, CA 94132

Institute of Government Studies
109 Moses Hall
University of California
Berkeley, CA 94720

Government Documents
Kate Wingerson
(2 copies; 1 to Potrero Branch)
City Library - Civic Center
100 Larkin Street
San Francisco, CA 94102

Hastings College of the Law - Library
200 McAllister Street
San Francisco, CA 94102-4978

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Martin C Levin Inv CO LLC
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Corwin Booth/ C&C Investments
221 Main St.
San Francisco CA 94105-1906

Shorenstein Realty Investors
555 California St. FL 49
San Francisco CA 94104-1502

PROJECT AREA TENANTS AND OWNERS

Tenants and other property owners in the Project Area, approximately 90 parties, were sent notices of availability of the Draft EIR and Draft EIR public hearing. A complete copy of the distribution listing is available in the Planning Department office at 1660 Mission Street, as part of File No. 97.717E.

VIII. REPORT PREPARERS; ORGANIZATIONS AND INDIVIDUALS CONSULTED

EIR AUTHORS

Planning Department, City and County of San Francisco
1660 Mission Street
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EIR Coordinator: Carol Roos

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Douglas A. Thomas

Appendix A
Notice of Preparation/Initial Study/EIR Requirement

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: May 30, 1998

Joint Lead Agencies:

Planning Department, City and County of San Francisco
1660 Mission Street - 5th Floor, San Francisco, CA 94103

San Francisco Redevelopment Agency (SFRA)
770 Golden Gate Avenue
San Francisco, CA 94102

Agency Contact Persons:		**Telephone:**
	Carol Roos, Planning	(415) 558-6389
	Thomas Conrad, SFRA	(415) 749-2492

Project Title: 97.717E, Pacific Exchange

Project Sponsors: Pacific Exchange
San Francisco Redevelopment Agency

Project Contact Person: Michael J. Burke, Ellman, Burke, Hoffman & Johnson

Project Address: North side of Folsom Street, between Spear and Main Streets

Assessor's Block(s) and Lot(s): Block 3740 - Lots 27, 29, 30, 31, 32

City and County: San Francisco

Project Description: The proposed project would expand the existing Rincon Point-South Beach Redevelopment Area by approximately 60,000 square feet, demolish two existing buildings, and construct a new headquarters for the Pacific Exchange. To meet trading needs of the Pacific Exchange and the needs of its 552 members and its clearing firms, at least through the year 2010, the Pacific Exchange proposes to construct a new 17-story, 234-foot tall structure to replace its existing operations now in several locations in the Financial District. The new building would include a three-level parking garage below grade and new trading floors above grade, with offices and support space to accommodate up to 3,260 employees. The parking garage would accommodate about 550 automobiles as a valet-park garage. The parking garage would likely be owned by the City and operated by the City or a non-profit corporation as a public parking garage. Above the parking garage, the building would contain about 425,500 gross square feet of space in two main components: a 5-story Trading and Technology Center, consisting of about 143,100 gross square feet, and a 17-story office tower, consisting of about 274,000 gross square feet. The ground floor would contain about 8,400 square feet of retail space. The project would require an amendment of the Rincon Point-South Beach Design for Development document to provide development standards for the project site. Conforming General Plan amendments would also be required.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Section 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal to the City Planning Commission of this Determination that an EIR is required: **July 1, 1998 at 5 p.m.** An appeal requires: 1) a letter specifying the grounds for the appeal, and; 2) a $209.00 filing fee.

HILLARY E. GITELMAN
Environmental Review Officer
Planning Departement

THOMAS CONRAD
Chief Planner
San Francisco Redevelopment Agency

ER5 6/96

PLANNING DEPARTMENT
City and County of San Francisco 1660 Mission Street San Francisco, CA 94103-2414
(415) 558-6378
PLANNING COMMISSION FAX: 558-6409
ADMINISTRATION FAX: 558-6426
CURRENT PLANNING/ZONING FAX: 558-6409
LONG RANGE PLANNING FAX: 558-6426

May 30, 1998

Notice of Preparation of a Draft Environmental Impact Report

TO: Responsible and Trustee Agencies

FROM: The San Francisco Redevelopment Agency and the
San Francisco Planning Department (Joint Lead Agencies)

The San Francisco Redevelopment Agency and the San Francisco Planning Department are preparing an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR prepared by us when considering any approvals for the project.

Project Title: 97.717E: Pacific Exchange Project

Project Sponsors: The San Francisco Redevelopment Agency
Pacific Exchange

Project Description:

The proposed project would expand the existing Rincon Point-South Beach Redevelopment Area by approximately 60,000 sq. ft., demolish two existing buildings, and construct a new 17-story (234-foot tall) headquarters for the Pacific Exchange, a national securities marketplace. The project site is located on the north side of Folsom Street between Spear and Main Streets (Assessor's Block 3740, Lots 27, 29, 30, 31, and 32). The proposed building would include about 274,000 gross sq. ft. of office space, a 143,100 sq. ft. "Trading and Technology Center," containing trading floors and ancillary spaces, and about 8,400 sq. ft. of ground floor retail space. About 264 surface parking spaces on the site would be removed and a new three-level, below-grade parking structure would be constructed, containing up to approximately 550 publicly accessible valet-park spaces.

The proposed project may have a variety of environmental impacts, and an initial study has been prepared to consider these and identify issues that require analysis in the EIR. This document is either attached or is available from the Planning Department or Redevelopment Agency upon request. Please direct all requests, and all responses to this notice to Carol Roos of the San Francisco Planning Department at the address above, or to Tom Conrad of the San Francisco Redevelopment Agency at 770 Golden Gate Avenue, San Francisco, CA 94102. In your response, please provide the name of a contact person in your agency.

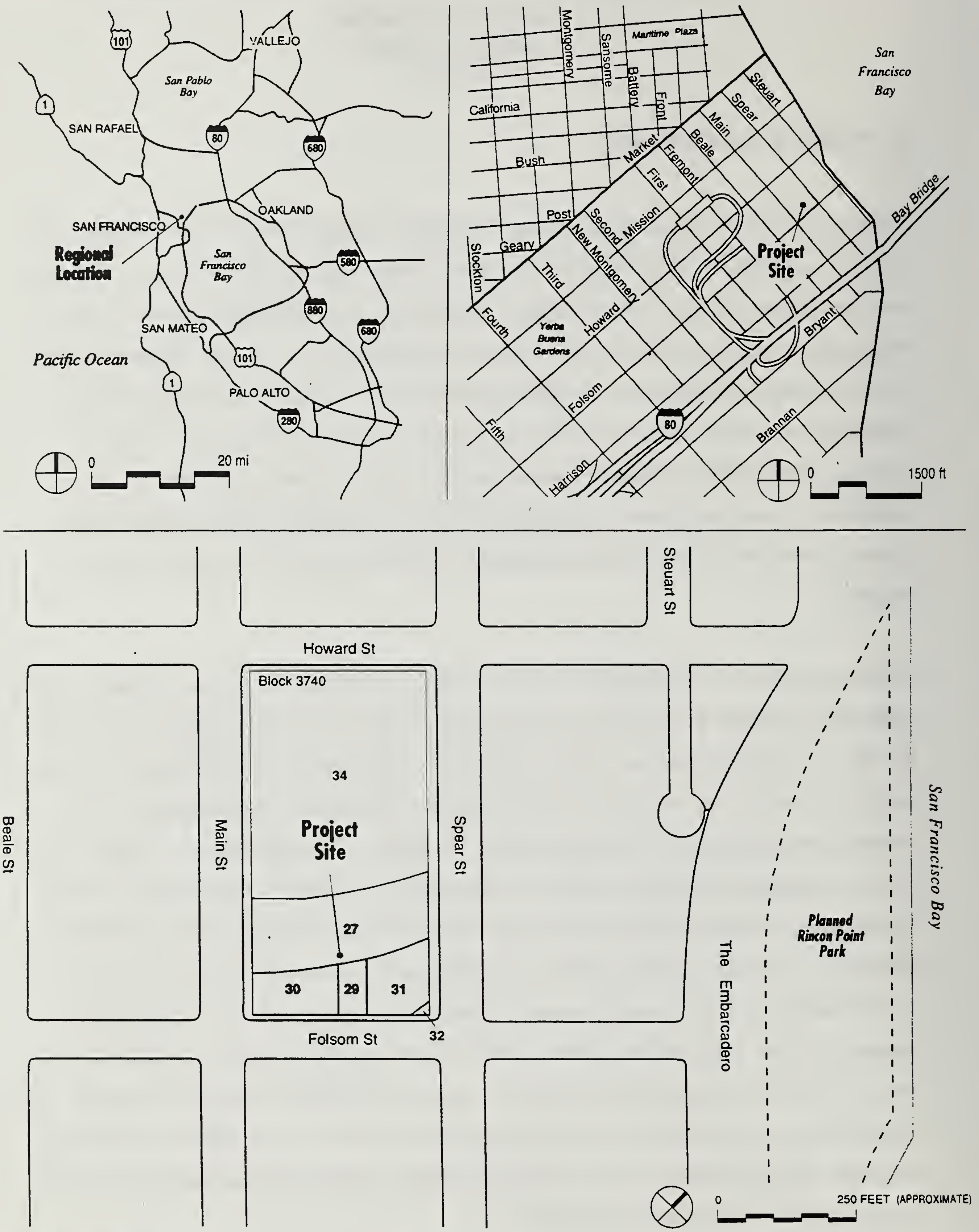
Due to the time limits mandated by state law, your response should be sent at the earliest possible date, but no later than 30 days after receipt of this notice.

PACIFIC EXCHANGE
INITIAL STUDY
97.717E

I. PROJECT DESCRIPTION

The proposed project would expand the existing Rincon Point-South Beach Redevelopment Area by approximately 60,000 square feet, demolish two existing buildings, and construct a new headquarters for the Pacific Exchange (Exchange). To meet the trading needs of the Exchange and the needs of its 552 members and its clearing firms, at least through the year 2010, the Exchange proposes to construct a new 17-story, 234-foot tall structure. The Exchange, its members, and its clearing firms currently occupy all or portions of five separate, older buildings generally located within the block bounded by Sansome, Pine, Montgomery, and Bush Streets, primarily at 301 Pine Street and 220 Montgomery Street. Exchange activities at these locations would be consolidated into the new headquarters building.

As shown in Figure 1, the project site is in the South of Market area of San Francisco, on the north side of Folsom Street, between Main and Spear Streets. The site consists of Lots 27, 29, 30, 31, and 32 of Assessor's Block 3740, and is approximately 54,000 square feet in size. Lot 27 is owned by the San Francisco Department of Real Estate; the remaining lots are privately owned and would be acquired by the Exchange or the Redevelopment Agency. Lot 27 was a California Department of Transportation right-of-way for a section of the elevated Embarcadero Freeway until the freeway was demolished following the 1989 Loma Prieta Earthquake. Currently, the City owns the lot and leases it as a surface public parking lot. Lots 31 and 32 are also operated as a surface public parking lot. The two existing public parking lots have a total of 264 spaces. Lots 29 and 30 together contain two attached, one-story, 15-foot tall commercial structures that occupy about 12,000 square feet of the site. The building on Lot 30 is retail space occupied by Books Inc. Outlet. The other is a warehouse structure. These buildings would be demolished and the existing surface parking lots would be displaced as part of the proposed project.



Source: EIP Associates

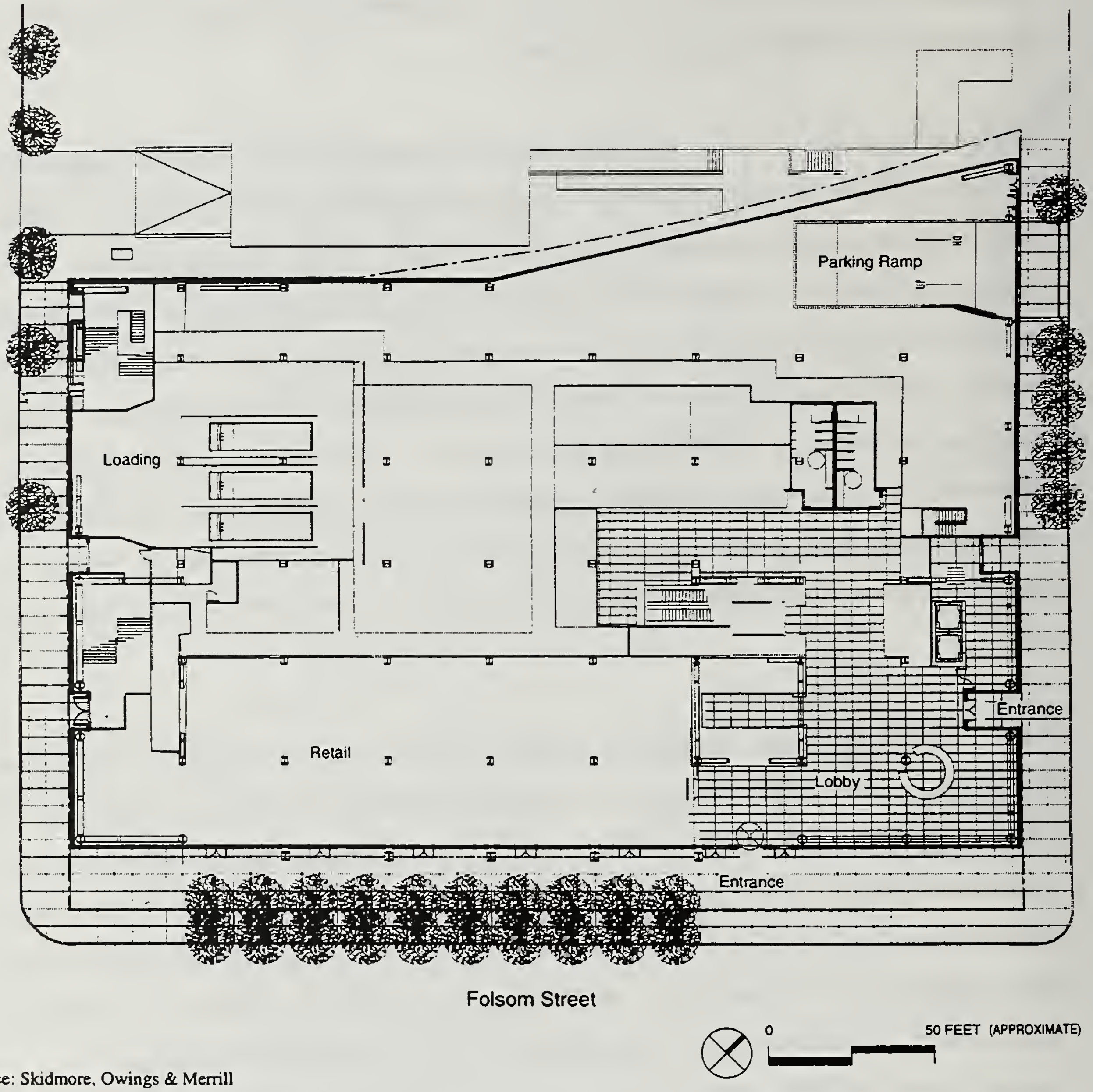
Project Location Figure 1
Pacific Exchange Initial Study

The proposed project would include a 160,350 gross square foot, three-level, below-grade parking garage and a new state-of-the-art facility (the Exchange facility) above grade for the Exchange, its members, and its clearing firms. Representative floor plans and building elevations are illustrated in Figures 2 through 5.

The parking garage would accommodate about 400 automobiles as a self-park garage or about 550 automobiles as a valet-park garage. It would likely be operated by the City or a non-profit corporation as a valet-park public parking garage. The project site would be subdivided vertically so that the Exchange would own and operate the Exchange facility, the City would own the parking garage, and the City or a non-profit entity would own and operate the parking garage. If the parking garage were owned by the Exchange or another commercial entity, it would be operated in accordance with the "transit first" policies in the General Plan as reflected in the short-term rate structure specified in City Planning Code Section 155(g). In either event, the garage would be available for parking for non-Exchange uses, such as the Giants ballpark and anticipated office, restaurant, retail, and residential development in the area.

Above the parking garage, the Exchange facility would contain about 425,500 gross square feet of space in two main components: a Trading and Technology Center, consisting of about 143,100 gross square feet, and an office tower above the Trading and Technology Center, consisting of about 274,000 gross square feet. The Trading and Technology Center would occupy floors one through five and would house the Exchange's equities and options trading floors, a technology and data center, and related support facilities and services. The tower, consisting of floors six through 17, would provide office space for the Exchange administration, members, clearing firms, other Exchange-related firms, as well as other office tenants. By 2010, the Exchange, its members, and its clearing firms would be expected to occupy the entire building with about 3,260 employees.

The main pedestrian entrance and lobby would front Folsom Street at the east end of the site. The ground floor would contain about 8,400 gross square feet of retail space intended to meet

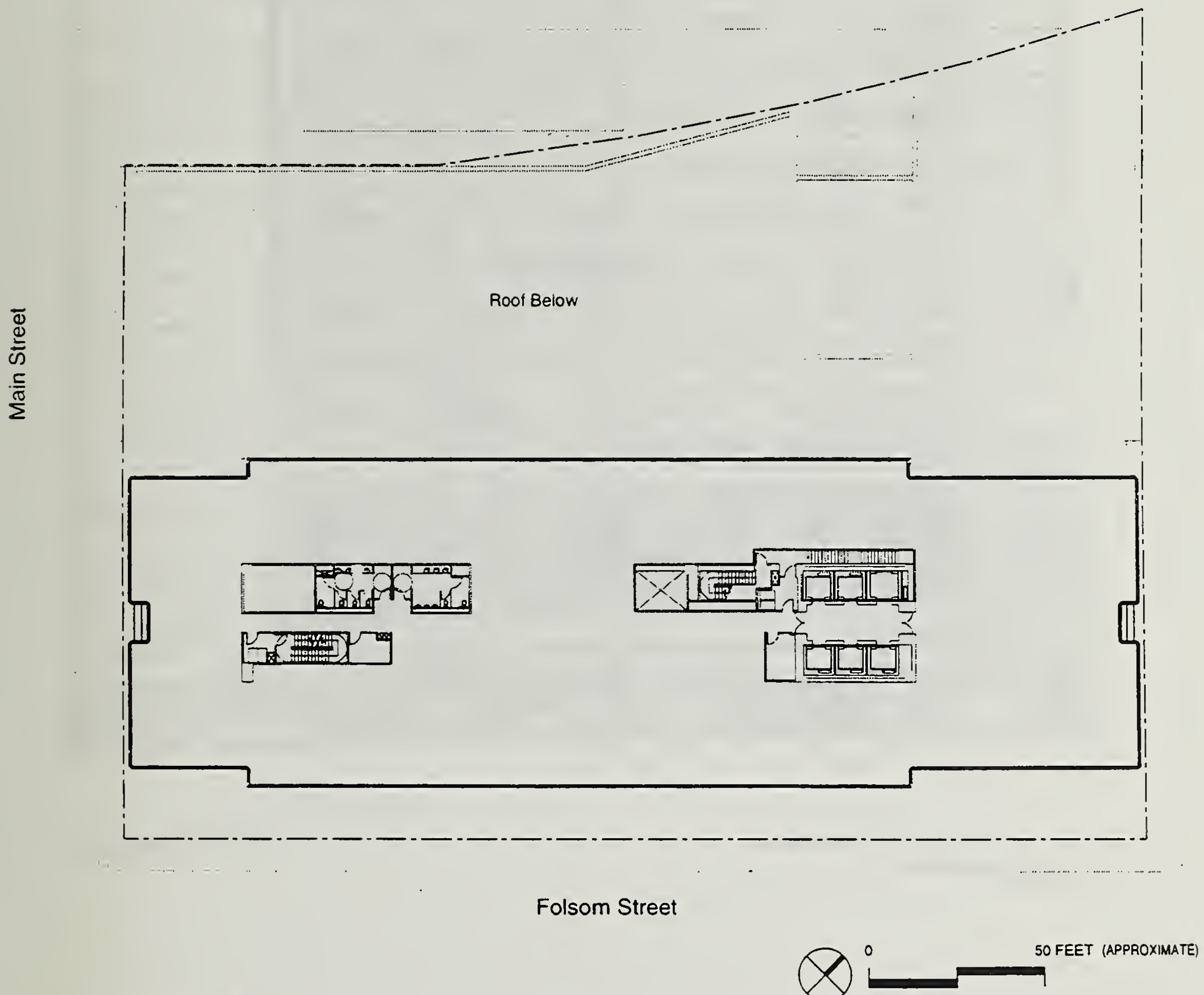


Source: Skidmore, Owings & Merrill

EIP

Ground-Level Floor Plan **Figure 2**

Pacific Exchange Initial Study

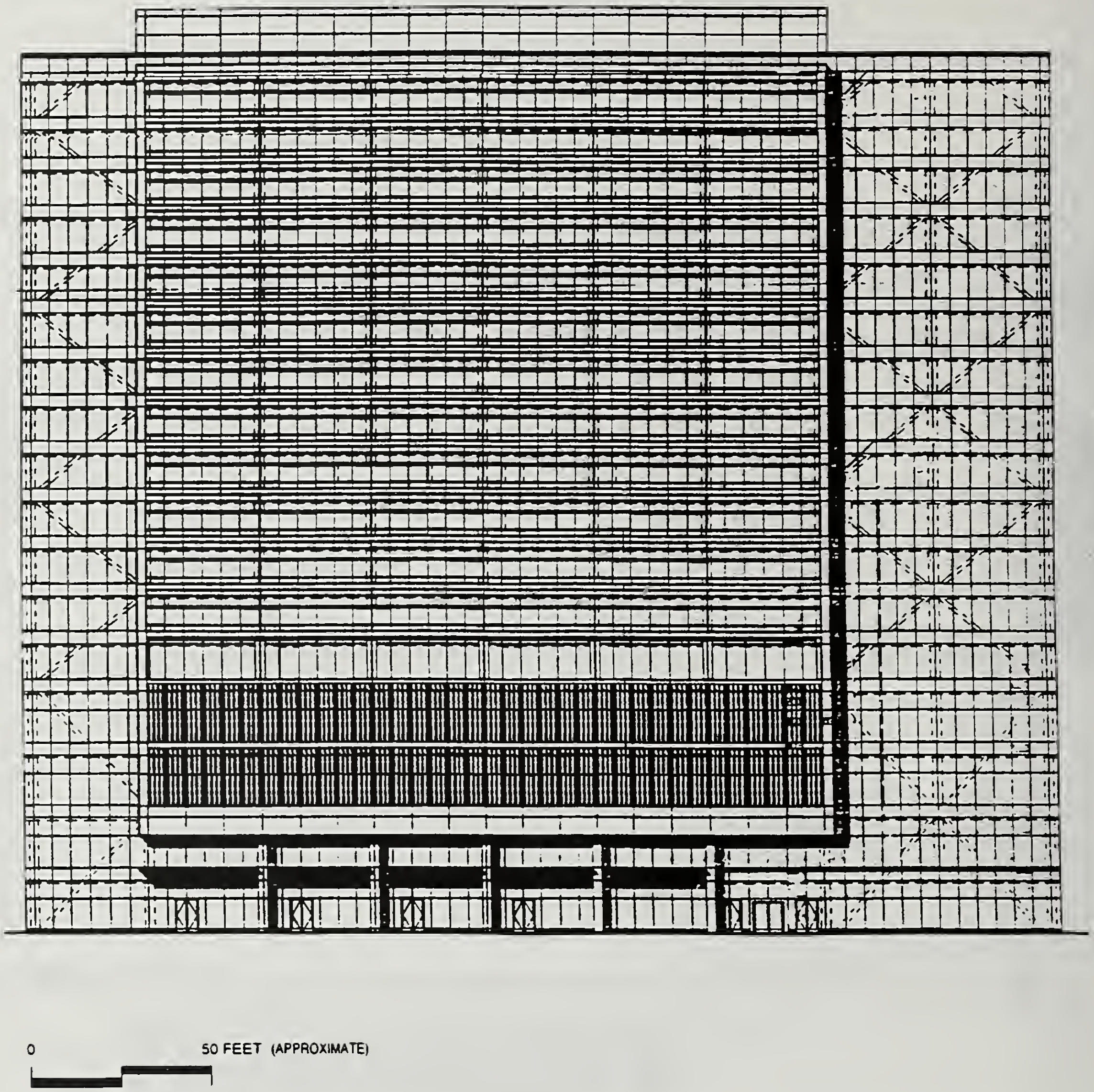


Source: Skidmore, Owings & Merrill

EIP

Typical Office Tower Floor Plan Figure 3

Pacific Exchange Initial study

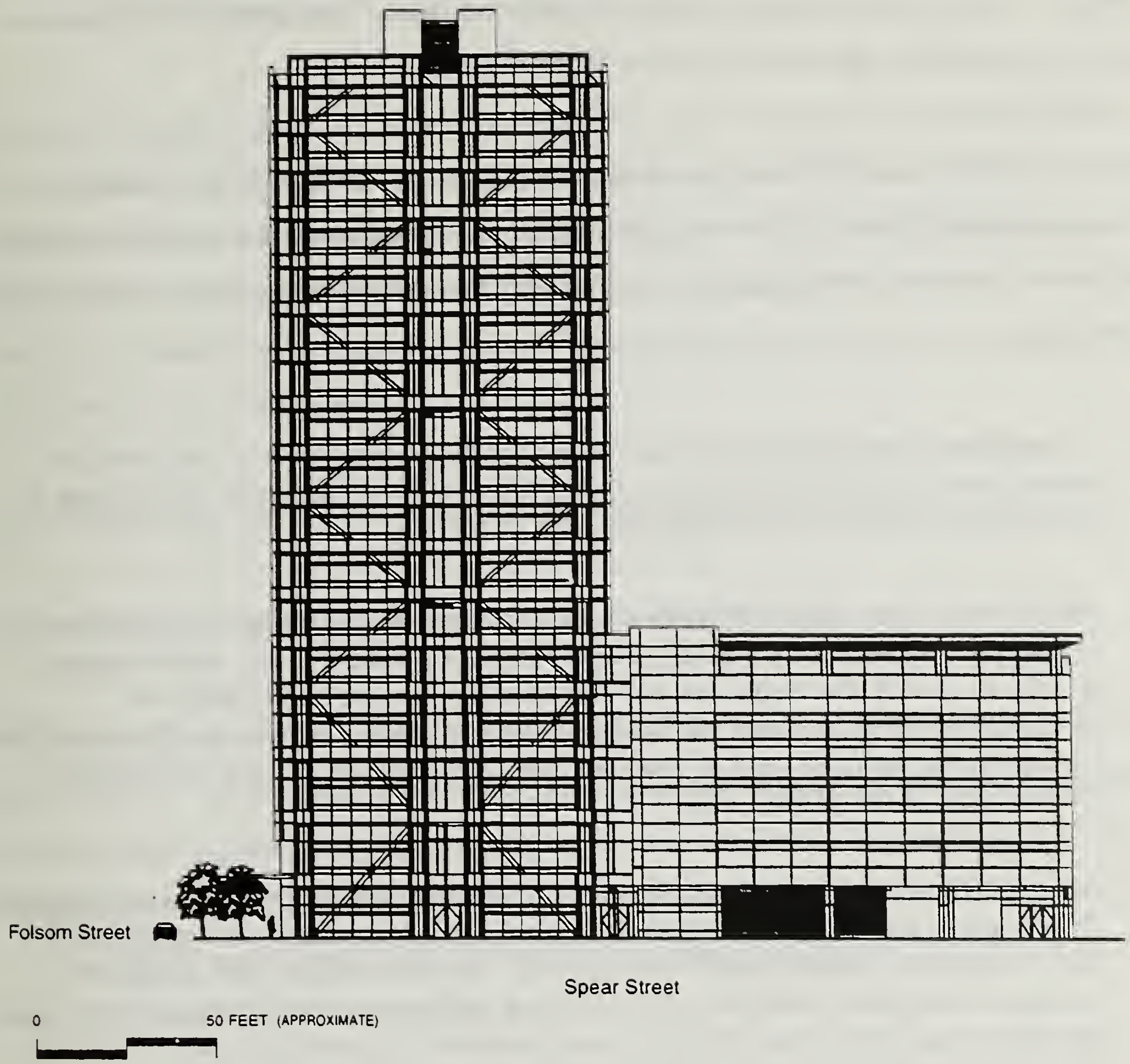


Source: Skidmore, Owings & Merrill

EIP

South Elevation Figure 4

Pacific Exchange Initial Study



Source: Skidmore, Owings & Merrill

EIP

East Elevation Figure 5
Pacific Exchange Initial Study

the convenience and service needs of area workers and residents, and support services for the Exchange. Three off-street loading spaces are proposed, with access from Main Street. Access to the parking ramps would be from Spear Street.

Lot 27 is currently zoned 'P' (Public) and the other lots are in the C-3-S Commercial (Downtown Support) district. The entire project site is currently within a 200-S Height and Bulk district. To allow development of the Exchange as envisioned, the project would include the following:

- Amendment of the Downtown Plan Element of the General Plan to designate the project site C-3-O (SD) (Downtown Office [Special Development]), and include the project site within a 250-S Height and Bulk district;

- Amendment of the Rincon Point-South Beach Redevelopment Plan to enable the San Francisco Redevelopment Agency (Redevelopment Agency) to use redevelopment powers to remedy the blight that now characterizes the site and to facilitate development of the project if the Redevelopment Agency Commission deems such use necessary and desirable, and to establish land use standards to allow and control development of the project; and

- Amendment of the Rincon Point-South Beach Redevelopment Project Area Design for Development document to establish design objectives, standards, and guidelines to allow and control development of the project. The amendments are expected to designate a maximum base height of 80 feet; a maximum building height of 240 feet; a maximum plan dimension of 270 feet and maximum diagonal dimension of 283 feet; and a maximum floor size of 29,950 square feet.

On December 18, 1997, the City Planning Commission amended the Rincon Point-South Beach Project Area Preliminary Plan to enable the City of San Francisco and the Redevelopment Agency to consider the appropriateness of the above-described actions. In addition, the project would require execution of an owner-participation agreement or disposition and development agreement, or both, between the Redevelopment Agency and the Exchange. This agreement would allow and govern the physical development of the project, and would establish and govern the relationships among the Redevelopment Agency, the City of San Francisco, and the Exchange regarding the acquisition, ownership, consolidation, and potential subdivision of the project site, and the financing, construction, ownership, and operation of the project improvements.

The San Francisco Board of Supervisors must also approve the terms of the agreement pursuant to which the City of San Francisco would convey an interest in the City-owned Parcel (Lot 27) to the Exchange. Other project approvals would include building permit authorization, acceptance of a Site Mitigation Plan if required in accordance with Article 20 of the San Francisco Public Works Code, and approvals required to implement and operate the proposed public parking facility.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

This Initial Study examines the Pacific Exchange project to identify its potential effects on the environment. On the basis of this study, project-specific effects that have been determined to be potentially significant relate to transportation and circulation, air quality and climate (including wind and shadows), and growth inducement. These issues will be analyzed in an environmental impact report (EIR). Land use and visual quality aspects of the project will be included in the EIR for informational purposes.

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following effects of the Pacific Exchange project have been determined to be either insignificant or to be mitigated through measures included in the project: land use; visual quality; population, employment, and housing; noise; utilities and public services; biology; geology and topography; water; energy and natural resources; hazards; and cultural resources. These issues are discussed below and require no further environmental analysis in the EIR.

III. ENVIRONMENTAL EVALUATION CHECKLIST AND DISCUSSION

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS

		Not Applicable	Discussed
1.	Discuss any variances, special authorizations, changes proposed to the City Planning Code or Zoning Map, if applicable.	___	X
*2.	Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable.	___	X

The Pacific Exchange project would include amendments to the Rincon Point-South Beach Redevelopment Plan and associated Design for Development document to include the project site within the boundaries of the Rincon Point-South Beach Redevelopment Area and to provide the site with land use controls and design standards. The EIR will discuss these proposed amendments as well as the approvals necessary to enact them. The EIR will also discuss any concomitant amendments to the General Plan and the City Planning Code, and will analyze the project in relation to these documents. Relevant plans include the Downtown Plan, The Rincon Hill Plan, the Urban Design Element, the Commerce and Industry Element, and proposed plans for the Transbay Area.

B. ENVIRONMENTAL EFFECTS

1. Land Use

		Yes	No	Discussed
*a.	Disrupt or divide the physical arrangement of an established community?	___	X	X
b.	Have any substantial impact upon the existing character of the vicinity?	___	X	X

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*Derived from *State CEQA Guidelines* Appendix G; normally a significant effect.

The project site is located in the South of Market Area of San Francisco that transitions from high-intensity office use to mixed low-rise commercial uses, with some residential uses. Nearby residential space includes condominiums in the mixed-use Hills Plaza, to the southeast of the project site. North of the project site are Rincon Towers, a mixed-use retail, office, and residential development, and high-rise office buildings, including 201 Mission Street, 123 Mission Street, 100 Spear Street, 150 Spear Street, and 221 Main Street adjacent to the project site. To the south of the project is a mixture of buildings, including the U.S. Postal Service buildings and surface parking. To the east and west are surface parking, two to four-story commercial structures, and former Embarcadero Freeway lands. These former freeway lands are expected to develop with mixed uses, including office, residential, and retail uses. When constructed, the approved Gap Building headquarters will be east of the project site across Spear Street, adjacent to The Embarcadero. A public park, Rincon Point Park, is proposed on the bayward side of The Embarcadero between Howard and Harrison streets. The project would increase the density of land uses at the site but would be consistent with the office use character of the block bounded by Howard, Folsom, Main, and Spear Streets. The project would extend the Financial District further into the South of Market area.

Overall, the project would be consistent with existing and planned land uses in the vicinity and would not have a substantial adverse effect on land use. Land use will be discussed in the EIR for informational purposes.

2. Visual Quality

		Yes	No	Discussed
*a.	Have a substantial, demonstrable negative aesthetic effect?	___	X	X
b.	Substantially degrade or obstruct any scenic view or vista now observed from public areas?	___	X	X
c.	Generate obtrusive light or glare substantially impacting other properties?	___	X	X

The proposed 17-story building would be of similar height as newer buildings in the project block, such as the adjacent 16-story 221 Main Street building. It would be taller than older buildings south of the site. The 234-foot (252 feet to top of mechanical penthouse) project would be shorter than the approved Gap building, which would rise 287 feet, across Spear Street. With a steel-framed glass facade, the project would continue the variety of massing and materials found in newer developments in the vicinity. The building would be visible from nearby locations on Folsom Street, and from Main and Spear Streets south of the site. From the north on Spear or Main Streets, views of the project would be limited because of intervening high-rise buildings. From The Embarcadero and planned Rincon Point Park east of the site, views of the project would be limited by the approved Gap building. The project would be partially visible from longer-range view points, such as Twin Peaks or Potrero Hill, as part of overall views of the Financial District. Such views would be limited by existing, intervening high-rise buildings.

The project would not degrade scenic views of San Francisco Bay or other scenic views from public areas, and would not have a substantial, demonstrable negative aesthetic effect. Visual quality will be discussed in the EIR for informational purposes.

The project would comply with City Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. Therefore, mirrored glass would not be used, and the building would not result in glare affecting other properties. The EIR will, therefore, not discuss glare.

3. Population

		Yes	No	Discussed
*a.	Induce substantial growth or concentration of population?		X	X
*b.	Displace a large number of people (involving either housing or employment)?		X	X

c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	___	X	X

The project proposes to construct a new facility to consolidate and house the Pacific Exchange, its members, and its clearing firms. Demolition of the existing structures on the site would displace about 50 employees. These employees would be expected to relocate within San Francisco or elsewhere in the Bay Area. At full occupancy, the project would house about 3,260 employees. Some of these would likely be new employees; some would relocate from other San Francisco office space. By the year 2010, the Exchange anticipates an increase of 1,760 employees over the existing 1,500 Exchange and Exchange-related employees in San Francisco. San Francisco's employment is projected to grow from 534,980 employees to 673,495 employees in 2015, an increase of 26%./1/ Therefore, project-related employment growth would constitute about 1.3% of citywide employment growth by the year 2015. This potential increase in employment would be minimal in the context of the total employment in greater San Francisco.

San Francisco consistently ranks as one of the most expensive housing markets in the United States. San Francisco is the central city (and most urban place) in an attractive region known for its agreeable climate, open space and recreational opportunities, cultural amenities, strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support strong housing demands in the City. New housing to relieve the market pressure created by the strong demand is particularly difficult to provide in San Francisco because the amount of land available is limited, and because land and development costs are high.

An estimated 311,430 households resided in San Francisco in 1995. By 2015, San Francisco households are expected to increase by 32,309 households to 343,739 households, a 10% increase./2/ Using (the proposed) update of the Office of Affordable Housing Production Program methodology, the project would create a demand for about 605 new dwelling units./3/ Demand would be less if a greater than usual percentage of new office employees is already employed and living locally. Housing demand in and of itself is not a physical environmental effect, but an imbalance between local employment and housing can lead to long commutes with traffic and air quality impacts. These traffic and air quality issues will be analyzed in the EIR. Also, expansion of the Rincon Point-South Beach Redevelopment Area would be expected to result in increased revenues for housing production in the area.

Population and housing issues require no further analysis in the EIR.

4. Transportation

		Yes	No	Discussed
*a.	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	To Be Determined		
b.	Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	To Be Determined		
c.	Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	To Be Determined		
d.	Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	To Be Determined		

Increased employment at the project site would place increased demands on the local transportation system, including increased traffic, transit demand, and parking demand. The EIR will discuss project effects related to transportation and circulation, including intersection operations, transit demand, and impacts on pedestrian circulation, parking, and freight loading, as well as construction impacts.

5. Noise

		Yes	No	Discussed
*a.	Increase substantially the ambient noise levels for adjoining areas?	___	X	X
b.	Violate Title 24 Noise Insulation Standards, if applicable?	___	X	X
c.	Be substantially impacted by existing noise levels?	___	X	X

Traffic Noise

Ambient noise levels in the vicinity of the project are typical of noise levels in downtown San Francisco, which are dominated by vehicular traffic, including trucks, cars, MUNI buses, and emergency vehicles. Generally, traffic must double in volume to produce a noticeable increase in noise levels. Traffic volumes would not be expected to double as a result of the project; therefore, substantial increases in traffic noise in the project area would not be anticipated. In addition, the Exchange would be designed such that trading and data operations would not be affected by outside noise. Traffic volumes will be calculated as part of the transportation analysis in the EIR; however, traffic noise will not be discussed.

Building Equipment Noise

The proposed project would include mechanical equipment, such as air conditioning units and chillers, which could produce operational noise. These operations would be subject to the San Francisco Noise Ordinance, Article 29 of the San Francisco Police Code. Compliance with Article 29, Section 2909, would minimize noise from building operations. Therefore, the EIR will not discuss building equipment noise further.

Construction Noise

Demolition, excavation, and building construction would temporarily increase noise in the project area. For example, the project would require pile driving during construction, which would generate noise and possibly vibrations that could be considered an annoyance by occupants of nearby properties. In general, pile driving noise could be about 90 decibels (dBA) during impact at about 100 feet from the site. Pile driving would be expected to last about four weeks. Noise levels at receptors near the project site would depend on their distance from the source and on the presence or absence of noise barriers. The noise of the pile driver would be most noticeable directly in front of the construction site. Vibrations from the pile driving could be felt in adjacent buildings, which include retail and residential uses, and nearby hotel uses. To mitigate any impacts associated with noise generated from pile driving, the project would comply with regulations set forth in the San Francisco Noise Ordinance.

To further minimize noise and vibration from pile driving, the Exchange would require project construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The Exchange would also require that contractors schedule pile driving activity for times of the day that would minimize disturbance to neighbors (See Mitigation Measures, p. 33).

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the Police Code). The ordinance requires that noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA at a distance of 100 feet from the source. Impact tools, such as jackhammers and impact wrenches, must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Noise Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m., if noise would exceed the ambient noise level by 5 dBA at the project property line, unless a special permit is authorized by the Director of Public Works. Project demolition and construction operations would comply with the Noise Ordinance.

Although construction noise could annoy nearby workers and residents, particularly those adjacent to the project site, the impacts would be limited to the 31-month period during which the foundations and exterior structural and facade elements would be built. Interior construction noise would be substantially reduced by the exterior walls. Therefore, noise impacts would not be considered significant, and the EIR will not discuss them further.

6. Air Quality / Climate

		Yes	No	Discussed
*a.	Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	To Be Determined		
*b.	Expose sensitive receptors to substantial pollutant concentrations?	To Be Determined		
c.	Permeate its vicinity with objectionable odors?	___	X	X
d.	Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	To Be Determined		

Construction Emissions

During construction, air quality could potentially be affected for a short period. Heavy equipment could create fugitive dust and emit nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2), hydrocarbons (HC), and particulate matter with a diameter of less than 10 microns (PM_{10}) as a result of diesel fuel combustion. The primary pollutant of concern in fugitive dust would be PM_{10}.

Construction emissions would be short term and temporary, but could still cause adverse effects on local air quality. Bay Area Air Quality Management District (BAAQMD), in its CEQA Guidelines, has developed an analytical approach that obviates the need to quantitatively estimate these emissions. Instead, BAAQMD has identified a set of feasible PM_{10} control measures for construction activities. The project includes these measures (see p. 33) to reduce the effects of construction activities to an insignificant level. Because the project would include these mitigation measures, it would not cause significant construction-related air quality effects. Therefore, the EIR will not address these effects further.

Emissions from Operations

The extent of foreseeable traffic increases has not been determined. The project could potentially result in air quality impacts if traffic volumes increase substantially. The EIR will calculate emissions and compare them to applicable significance thresholds published by the Bay Area Air Quality Management District. Carbon monoxide emissions and the possibility of exceeding carbon monoxide standards at congested intersections and nearby sensitive receptors could be of particular concern.

Shadows

Section 295 of the City Planning Code was adopted in response to Proposition K (passed in November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Department by any structure exceeding 40 feet unless the City Planning Commission finds the impact to be insignificant. Although no Proposition K parks are located in the immediate vicinity of the project, the proposed structure could increase shadows on sidewalks and other open spaces or plazas; therefore, a shadow study will be completed and the EIR will discuss its results.

Wind

Highrise buildings have the potential to channel wind, creating discomfort for pedestrians and people in seating areas. For sites in C-3 Districts, Section 148 of the City Planning Code establishes comfort criteria of 11 miles per hour (mph) equivalent wind speed for pedestrians and 7 mph for seating areas, not to be exceeded more than 10% of the time, year-round, between 7:00 a.m. and 6:00 p.m. Winds of 26 mph or greater are considered hazardous. Buildings which would cause an increase that exceeds the hazardous wind criterion for more than a single hour per year are not permitted under Section 148. The EIR will analyze the project's effects in regard to existing wind conditions. A wind tunnel test will be performed and the effects of the project will be compared to the Section 148 criteria.

7. Utilities / Public Services

		Yes	No	Discussed
*a	Breach published national, state or local standards relating to solid waste or litter control?		X	X
*b.	Extend a sewer trunk line with capacity to serve new development?		X	X
c.	Substantially increase demand for schools, recreation or other public facilities?		X	X
d.	Require major expansion of power, water, or communications facilities?		X	X

The Downtown Area Plan of the San Francisco Master Plan includes the project site. The Downtown Plan EIR evaluated the demand for public services and utilities serving Downtown./4/ This analysis remains the best available source of information regarding the general nature of the growth anticipated for the area in the future, and the project would fall within the development forecast for Downtown. The Downtown Plan EIR concluded that the demand for utilities and public services resulting from the C-3 districts would not be significant. The project, in particular, would increase demands relatively little when considered within the context of the greater Downtown area, which is already densely developed.

Solid Waste

San Francisco's solid waste is disposed of at the Altamont Landfill. A substantial expansion of the landfill has recently been approved; therefore, the landfill will be able to accommodate

San Francisco's solid waste stream well into the future. The solid waste associated with project construction and operation would not substantially affect the foreseeable life of the Altamont Landfill; therefore, the EIR will not further discuss the issue of solid waste generation.

Water

The project would incrementally increase the demand for water in San Francisco. However, the Exchange building would be designed to incorporate water-conserving measures, such as installing low-flush toilets and urinals, as required by California State Building Code Section 402.0(c). The San Francisco Water Department would provide sufficient water to meet the needs of the project. Because the project would not result in a substantial increase in water use, it would not result in a significant impact, and therefore, the EIR will not discuss the issue further.

Wastewater

The site is served by San Francisco's combined sewer system, which handles both sewage and storm water runoff. Water treatment is provided primarily by the Southeast Pollution Control Plant. The project would meet any wastewater pretreatment requirements of the San Francisco Public Utilities Commission, as required by the San Francisco Industrial Waste Ordinance. No new sewer construction would be needed because the project site is already served by sewer infrastructure. Furthermore, the project would have little effect on the total wastewater volume discharged through the combined sewer system during wet weather, particularly since storm water runoff contributes greatly to the total flow and the site is already paved (resulting in maximum storm water flows). For these reasons, the EIR will not evaluate demands on wastewater treatment facilities further.

Schools

The project would employ about 1,760 individuals in addition to the existing 1,500 employees of the Exchange and its member firms. Some of these employees would have children who would attend San Francisco schools. Many of the children of the employees would attend schools outside San Francisco. Because these school children would be dispersed among many neighboring communities, their numbers would be too small to require any school district to construct new school facilities. For this reason, the project would have an insignificant environmental impact related to schools, and the EIR will not discuss the issue further.

Police and Fire Protection Services

The project site presently receives police and fire protection services, and the project would create little additional demand for fire and police services in the area. Although the project could increase the number of calls received from the area or the level of regulatory oversight that must be provided as a result of the increased concentration of activity on-site, the increase in responsibilities would not likely be substantial in light of the existing demand for police and fire protection services in Downtown. Furthermore, the increase in demand would not require the construction of any new police of fire prevention facilities. For these reasons, the EIR will not discuss further police or fire protection services.

Power and Communications Facilities

The project site is already served by power utilities and communication facilities. The Exchange building would tap into the existing power and communications grids. Therefore, no new power or communications facilities would be necessary as a result of project implementation, and the EIR will not discuss this issue further.

8. Biology

		Yes	No	Discussed
*a.	Cause an increase in traffic which substantially affect a rare or endangered species of animal or plant, or the habitat of the species?	___	X	X
*b.	Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	___	X	X
c.	Require removal of substantial numbers of mature, scenic trees?	___	X	X

There are about 27 trees on the project site, all of which are at least 20 feet tall or have trunks measuring at least 4 inches in diameter. Of the 27 trees, there are ten eucalyptis, nine fig, seven Australian tea, and one walnut tree. The trees are located along the Folsom and Main Street sidewalks and along the northern edge of the site, which was at one time adjacent to the now demolished Embarcadero Freeway. Most, if not all, of the trees at the project site would be removed for project construction. Given the small number, types, and location of these trees, this would not be a significant effect and will not be discussed further in the EIR.

Almost all of the project site is covered by impervious surfaces offering little or no habitat value. The project would not affect any threatened, rare, or endangered plants, animals, or habitats. The project would not interfere with any resident or migratory species. This topic will not be discussed in the EIR.

9. Geology / Topology

		Yes	No	Discussed
*a.	Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	___	X	X
b.	Change substantially the topography or any unique geologic or physical features of the site?	___	X	X

The site is fairly flat and occupied by buildings and paving. Test borings indicate that the upper 12 to 17 feet of soil consists of sand and silty sand fill with rubble. Beneath the fill is a layer of marine deposits (Bay Mud) that ranges from 17 to 35 feet thick. The marine deposits are underlain by dense silty and clayey sand to depths ranging from 40 to 105 feet below the surface. Franciscan Formation bedrock (shale and sandstone) lies below these depths. California Department of Transportation plans indicate that the foundations of the former Embarcadero Freeway are buried at the site and consist of reinforced concrete pile caps and steel piles./5/

The primary geotechnical issues that would be addressed in the design are (1) foundation type and supporting capacity, (2) settlement under building loads and earthquake shaking, (3) excavation and temporary shoring, and (4) dewatering./6/ Construction of the parking garage would require excavation to a depth of about 35 feet and disposal of about 80,000 cubic yards of soil and debris. Stability and site safety during excavation would be achieved through standard, accepted shoring techniques.

The Community Safety Element of the *San Francisco General Plan* contains maps that show areas subject to geologic hazards. The project site is located in an area subject to groundshaking from earthquakes along the San Andreas and Northern Hayward Faults and other faults in the San Francisco Bay Area (Maps 2 and 3). The project site is also in an area of liquefaction potential (Map 4), a Seismic Hazards Study Zone designated by the California Division of Mines and Geology. For any development proposal in an area of liquefaction potential, the Department of Building Inspection, in its review of the building permit application, requires the project sponsor to prepare a geotechnical report that assesses the nature and severity of the hazards at the site and recommends project design and construction features to reduce the hazards. To ensure compliance with all San Francisco Building Code provisions regarding structural safety, when the Department of Building Inspection reviews the geotechnical report and building plans for a proposed project, it determines necessary engineering and design features for the project to reduce potential damage to structures from groundshaking and liquefaction. The project includes a mitigation measure (see p. 33) to facilitate Building Code compliance and reduce potential geological hazards.

The proposed project would be designed as an "essential facility." Structural design standards for seismic safety are higher for essential facilities than those for other buildings. These higher standards are similar to those used for critical public buildings, such as hospitals and fire stations. The project includes these standards because the Securities Exchange Commission requires that trading operations be fully functional immediately following a major earthquake. The project structure (including its internal utilities) would be designed with sufficient redundancies to ensure that the Exchange could continue its operations following a worst case earthquake. The project would include fuel storage facilities to supply electric generators and water storage facilities for operating and cooling computer systems. In this way, potential damage from geologic hazards at a project site would be ameliorated through the Department of Building Inspection requirement for a geotechnical report, building design plans, and review of the building permit application.

The project would not alter the topology of the site, or otherwise affect any unique geologic or physical features of the site. No further analysis of geology and seismicity is required in the EIR.

10. Water

		Yes	No	Discussed
*a.	Substantially degrade water quality, or contaminate a public water supply?	___	X	X
*b.	Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	X	X
*c.	Cause substantial flooding, erosion or siltation?	___	X	X

The project site is almost entirely paved or covered by structures; therefore, the project would not substantially affect the area of impervious surface at the site or alter site drainage.

Project-related wastewater and storm water would continue to flow to the combined sewer system. During construction, requirements to reduce erosion would be implemented pursuant to California Building Code Chapter 33, Excavation and Grading. During operations, the project would comply with all local wastewater discharge requirements.

The project would include excavation to about 40 feet below grade; therefore, dewatering could be required. Any groundwater encountered during construction would be subject to the requirements of the San Francisco Industrial Waste Ordinance (Ordinance No. 199-77), requiring that groundwater meet specified standards before being discharged into the sewer system. The Bureau of Environmental Regulation and Management of the Department of Public Works would be notified if the project were to require dewatering.

Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater monitoring wells and/or instruments would be used to monitor potential settlement and subsidence. If, in the judgement of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor. The project would include mitigation measures to reduce the potential water quality effects of dewatering (see p. 34).

The project site is within the Eastside Reclaimed Water Use Area designated by Section 1029 of the Reclaimed Water Use Ordinance (approved November 7, 1991), which added Article 22 to Part II, Chapter X of the *San Francisco Municipal Code (Public Works Code)*. Effective 180 days from the date of this ordinance, non-residential projects over 40,000 sq. ft. that require a site permit, building permit, or other authorization, and are located within this area, shall provide for the construction and operation of a reclaimed water system for the transmission of the reclaimed water within buildings and structures. That is, the building would need to be designed with separate plumbing to service uses that could employ reclaimed water (*e.g.*, toilets). The ordinance also requires that owners, operators, or managers of all development projects register their project with the Water Department. The Water Department will then issue a certificate of intention to use reclaimed water, and reclaimed water shall be used unless the Water Department issues a certificate exempting compliance because reclaimed water is not available, an alternative water supply is to be used, or the sponsor has shown that the use of reclaimed water is not appropriate. No further analysis of water resources is required in the EIR.

11. Energy / Natural Resources

		Yes	No	Discussed
*a.	Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?		X	X
b.	Have a substantial effect on the potential use, extraction, or depletion of a natural resource?		X	X

The project would meet current state and local codes concerning energy consumption, including Title 24 of the California Code of Regulations. For this reason, it would not cause a wasteful use of energy. Therefore, energy consumption requires no further analysis and will not be discussed in the EIR.

12. Hazards

		Yes	No	Discussed
*a.	Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	X		X

*b.	Interfere with emergency response plans or emergency evacuation plans?	___	X	X
c.	Create a potentially substantial fire hazard?	___	X	X

Article 20 of the San Francisco Public Works Code (the "Maher Ordinance") requires that applicants for building permits within a certain area (largely the part of San Francisco created by landfill) prepare a site history and analyze the site's soil for hazardous wastes. The analysis is required if more than 50 cubic yards of soil are to be disturbed and the project is either to be on fill or at a location designated for investigation by the Department of Public Works. If the analysis reveals the presence of hazardous wastes, the ordinance requires site mitigation pursuant to the standards, regulations, and determinations of local, state, and federal regulatory agencies. Because the site once lay beneath Yerba Buena Cove, a part of San Francisco Bay that has since been filled, and because the project could disturb about 80,000 cubic yards of soil, the project is subject to Article 20./7/

Phase I and phase II environmental site assessments have been performed for the site in accordance with Article 20. These assessments involved preparing a site history, reviewing regulatory agency files, visiting the site, sampling and analyzing soil and groundwater, and surveying for underground storage tanks. According to the investigations, while the site was part of Yerba Buena Cove, a coal gasification plant operated nearby, discharging coal tar waste into the cove. This waste contained polynuclear aromatic hydrocarbons. The site was later filled during the 1880s using materials that could have also contained hazardous constituents. Additional fill could include debris from the 1906 earthquake, some of which contained polynuclear aromatic hydrocarbons, heavy metals, oil and grease, and volatile organic compounds. Subsequent uses of the site have included various industrial operations, such as a boiler works, iron works, foundry, warehouse, lumber yard, and truck repair facility. Underground storage tanks occupied a portion of the site adjacent to Spear Street until at least 1966, and no record indicates that these tanks have been removed.

Soil and groundwater analyses have confirmed the presence of some polynuclear aromatic hydrocarbons on site at levels exceeding U.S. Environmental Protection Agency Preliminary

Remediation Goals. Petroleum hydrocarbons have been measured at concentrations as high as 680 milligrams per kilogram in soil. Lead is the only metal detected in substantial concentrations; soluble lead concentrations on site exceed federal and state hazardous waste criteria in some places. An electromagnetic survey identified metal structures believed to be underground storage tanks adjacent to Spear Street.

In accordance with Article 20, the Exchange would submit a Site Mitigation Plan to appropriate agencies, including the San Francisco Department of Public Health, as part of the project. The Exchange would implement the Site Mitigation Plan prior to obtaining a building permit. The construction contractor would handle and dispose of excavated soils properly, employ worker health and safety and dust control procedures, and have a State Registered Professional Geologist or Engineer certify, at the completion of foundation activities, that all elements of the Site Mitigation Plan have been performed in compliance with Article 20 requirements.

Information is unavailable regarding the potential for the existing buildings at the project site to house materials containing asbestos, polychlorinated biphenyls (PCBs), lead, mercury, or other hazardous materials. Asbestos, PCBs, and lead were commonly installed through the 1970's in insulation, floor tiles, roofing tar, electrical transformers, fluorescent light ballasts, and paint. Mercury is common in electrical switches and fluorescent light bulbs. If such hazardous materials exist in buildings to be demolished, they can pose hazards to workers, neighbors, and the environment. However, the project includes a mitigation measure (see p. 35) that is intended to reduce the potential health risks associated with building materials containing asbestos, PCBs, lead, mercury, or other hazardous materials by securing the investigation, removal, and disposal of these materials prior to demolition of the buildings. Specifically, by requiring that a building survey be conducted to detect the presence of any possible hazardous materials at the project site, the measure would ensure compliance with the existing regulatory regime regarding the management of any potentially hazardous building components.

Provided that existing hazardous materials would be identified before demolition begins, implementation of existing laws and regulations would ensure the health and safety of workers, neighbors, and the environment. For example, the Bay Area Air Quality Management District regulates airborne asbestos and is to be notified ten days in advance of any proposed demolition. It randomly inspects removal operations. Also, the California Division of Occupational Safety and Health is to be notified of asbestos abatement operations. Asbestos abatement contractors are also to follow regulations contained in Title 8 of the California Code of Regulation wherever there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Demolition activities involving lead-based paint are to comply with Chapter 36 of the San Francisco Building Code, which applies to buildings constructed prior to 1979, which are assumed to contain lead-based paint. The ordinance requires that containment barriers be at least as protective of human health and the environment as those in the most recent *Guidelines for Evaluation and Control of Lead-Based Paint Hazards* promulgated by the U.S. Department of Housing and Urban Development./8/ PCBs are regulated under the federal Toxic Substances Control Act of 1976, and mercury is regulated as a hazardous waste.

Future conditions with the project would involve relatively small quantities of hazardous materials handled and stored for routine business purposes. Office functions would require many of the same types of hazardous materials typical of residential uses (e.g., paints, solvents, and cleaners), and the print shop would handle some inks, toners, and solvents. Commercial products would be labeled to inform users of potential risks and to instruct users in appropriate handling procedures, and most of these materials would be consumed as used, resulting in relatively little waste. In accordance with state and federal laws and regulations, businesses would be required to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers.

The greatest volume of hazardous material that would be expected at the project site would be fuel stored to power emergency generators, if necessary. The San Francisco Department of

Public Health would oversee the design, installation, and operation of any fuel storage tanks in accordance with regulations within its jurisdiction, including underground storage tank programs and aboveground petroleum storage programs, depending on the types of tanks installed. Applicable regulations require various provisions to contain possible spills. The Bay Area Air Quality Management District would oversee potential air emissions from testing the emergency generators.

An evacuation and emergency response plan would be developed by the project sponsor in consultation with the Mayor's Office of Emergency Services to ensure coordination between San Francisco's emergency planning activities and the project sponsor's plan to provide for building occupants in the event of an emergency. The project sponsor's plan would be reviewed by the Office of Emergency Services and implemented by the project sponsor before the Department of Public Works issues final building permits.

As a result of implementing the regulations summarized above, potential health and safety issues related to potentially contaminated building components, contaminated soil and groundwater, and future use of hazardous materials at the site would be reduced to less-than-significant levels, provided that the mitigation measures included in the project would be implemented. Therefore, these issues do not require further analysis and will not be discussed in the EIR.

13. Cultural Resources

		Yes	No	Discussed
*a.	Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	X		X
b.	Conflict with established recreational, educational, religious or scientific uses of the area?		X	X

c. Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code? ___ _X_ ___

Archeo-Tec Consulting Archaeologists completed an archival cultural resources evaluation consisting of a systematic review of available maps, photographs, drawings, oral accounts, and other documents./9/ According to that study, subsurface archaeological materials from the prehistoric / protohistoric, Spanish / Mexican and Early American periods (ca., 4,000 B.C. to A.D. 1848) would not likely be encountered at the project site because throughout these eras, the site lay beneath the shallow waters of Yerba Buena Cove, between 100-200 feet from the original shore of San Francisco Bay at Rincon Point (near the modern intersection of Folsom and Spear Streets). The area remained submerged beneath 5 to 10 feet of water until after the beginning of the California Gold Rush era of the middle 19th century.

The first development at the project site occurred during the early 1850s, when a series of wharfs were built from the shore. Throughout the 1850s, these wharfs constituted San Francisco's principal commercial thoroughfares to the area south of Market Street. Later in the 1850s, San Franciscans began to fill area now bounded by Howard, Folsom, Spear, and Main streets. By the middle 1870s, the project site was completely filled and developed. A variety of commercial and industrial enterprises were located there, including lumber yards, iron works, machine shops, and ship chandler's facilities. In addition, a few small boarding houses and two or three corner saloons occupied the site.

While the hulks of at least four Gold Rush era ships are known to exist in waterfront landfill in the vicinity of the project site, no evidence suggests that the remains of any 19th century vessels lie buried beneath the site. Nevertheless, previous archaeological research conducted south of Market Street has demonstrated that unrecorded and unanticipated maritime remains can be encountered. Accordingly, the possible existence of unrecorded maritime remains within the project area cannot be ruled out on the basis of available historical data.

Deposits of potentially significant, subsurface cultural resources dating from the Gold Rush and later 19th Century eras could exist within the project site. These cultural deposits could range in age between the middle-to-late 1850s and the beginning of the final quarter of the 19th century. Archaeological research conducted in close proximity to the project site suggests that subsurface cultural deposits existing within the site, if present, would consist of a range of domestic or commercial refuse.

Because the project would involve excavation at the site to a depth of about 40 feet, it could adversely affect subsurface deposits of cultural resources of significance, or potential significance. However, the project includes a mitigation measure (see p. 35) that is intended to reduce the potential impact to cultural resources to a less-than-significant level.

C. OTHER

	Yes	No	Discussed
Require approval of permits from City Departments other than the Department of City Planning or Bureau of Building Inspection or from Regional, State or Federal Agencies?	X		X

The project would include an amendment to the Rincon Point - South Beach Redevelopment Plan, and related actions by the San Francisco Redevelopment Agency, the Board of Supervisors, and the City Planning Commission. The San Francisco Board of Supervisors must also approve the terms of the agreement pursuant to which the City of San Francisco would convey an interest in the City-owned Parcel (Lot 27) to the Exchange.

D. MITIGATION MEASURES

	Yes	No	N/A	Discussed
1. Could the project have significant effects if mitigation measures are not included in the project?	X			X

2. Are all mitigation measures necessary to eliminate significant effects included in the project?	To Be Determined

The following are mitigation measures related to topics determined to require no further analysis in the EIR. The EIR will contain a chapter describing mitigation measures proposed as part of the project and measures that would be, or could be, adopted to reduce potential adverse project effects identified in the EIR.

Noise

1. During pile driving, the Exchange would require project construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The Exchange would also require that contractors schedule pile driving activity for times of the day that would minimize disturbance to neighbors.

Air Quality / Climate

2. The Exchange would require its contractors to (1) spray the site with water during demolition, excavation, and construction activities; (2) spray unpaved construction areas with water at least twice each day; (3) cover stockpiles of soil, sand, and other material; (4) cover trucks hauling debris, soils, sand, or other such material; and (5) sweep surrounding streets during demolition, excavation, and construction at least once each day to reduce particulate emissions./10/

Geology / Topography

3. One or more geotechnical investigations by a California-licensed geotechnical engineer are included as part of the project. The Exchange and its contractors would follow the recommendations of the final geotechnical reports regarding any excavation and construction for the project. The Exchange would ensure that the construction contractor conducts a pre-construction survey of existing conditions and monitors the adjacent building for damage during construction, if recommended by the geotechnical engineer.

4. If dewatering were necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the soils report would determine whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the Exchange to perform this monitoring. Instruments would be used to monitor potential settlement and subsidence. If, in the judgement of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The Exchange would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be born by the Exchange.

   If dewatering were necessary, the Exchange and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

5. The Exchange and its contractor would follow the geotechnical engineers' recommendations regarding installation of settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

Water Quality

6. If dewatering were necessary, the Exchange would follow the recommendations of the geotechnical engineer or environmental remediation consultant, in consultation with the Bureau of Environmental Regulation and Management of the Department of Public Works, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system.

   If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the Department of Public Works to reduce the amount of sediment entering the combined sewer system.

   The Exchange would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the Department of Public Works.

Hazards

7. The Exchange would ensure that building surveys for asbestos, PCBs, lead, mercury, and other possible hazardous materials would be performed prior to the start of demolition. Any hazardous materials discovered would be abated according to local, state, and federal laws, regulations, and standards.

Cultural Resources

8. Given the location and depth of excavation proposed, and the likelihood that archaeological resources would be encountered on the project site, the Exchange has agreed to retain the services of an archaeologist. The archaeologist would conduct a pre-excavation testing program to better determine the probability of finding cultural and historical remains. The testing program would use a series of mechanical, exploratory borings or trenches or other testing methods determined by the archaeologist to be appropriate.

   If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

   These additional measures would be implemented by the Exchange and could include a program of on-site monitoring of all site excavation, during which the archaeologist would record observations in a permanent log. The monitoring program, whether or not there are findings of significance, would result in a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency. During the monitoring program, the Exchange would designate one individual on site as its representative. This representative would have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources if they are encountered.

   If evidence of cultural resources of potential significance were found during the monitoring program, the archaeologist would immediately notify the Environmental Review Officer, and the Exchange would halt any activities that the archaeologist and the Environmental Review Officer jointly determine could damage such cultural resources. Ground disturbing activities that could damage cultural resources would be suspended for a total maximum of four weeks over the course of construction.

After notifying the Environmental Review Officer, the archaeologist would prepare a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the Exchange and the Redevelopment Agency, which would contain an assessment of the potential significance of the find and recommendations for what measure should be implemented to minimize potential effects on archaeological resources. Based on this report, the Environmental Review Officer would recommend specific additional measures to be implemented by the project sponsor. These additional measures could include a site security program, additional on-site investigations by the archaeologist, or documentation, preservation, and recovery of cultural material.

Finally, the archaeologist would prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration or recovery program is to be conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the Environmental Review Officer for review. Following approval by the Environmental Review Officer, copies of the final reports would be sent by the archaeologist directly to the Redevelopment Agency, President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. Three copies of the final archaeology reports would be submitted to the Office of Environmental Review, accompanied by copies of the transmittals documenting its distribution.

E. ALTERNATIVES

The EIR will analyze a variety of alternatives to the project that would reduce or eliminate any significant environmental effects. At a minimum, these alternatives will include a No Project Alternative and a Lesser Development Alternative. The Lesser Development Alternative could include a trading floor and office space for Exchange staff only (i.e., less office space than the project). An alternative or project variant that would omit on-site parking will also be considered, and the EIR will describe design alternatives and off-site alternatives that have been considered and rejected, along with the reasons for their rejection.

F. MANDATORY FINDINGS OF SIGNIFICANCE

Yes No Discussed

*1.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	___	X	___
*2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
*3.	Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	To Be Determined		
*4.	Would the project cause substantial adverse effects on human beings, either directly or indirectly?	To Be Determined		

G. ON THE BASIS OF THIS INITIAL STUDY

___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

___ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers __, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

_X_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

5/30/98
Date

Hillary E. Gitelman
Environmental Review Officer
for
Gerald G. Green
Director of Planning
Planning Department

5/29/98
Date

Thomas Conrad
Chief Planner
San Francisco Redevelopment Agency

Notes:

1. Keyser Martson Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum,* prepared for the San Francisco Redevelopment Agency, March 30, 1998.

2. Keyser Martson Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum,* prepared for the San Francisco Redevelopment Agency, March 30, 1998.

3. City and County of San Francisco Planning Code, Section 313.3 of the Office of Affordable Housing Production Program Ordinance, applies only to office development. However, office development on property under the jurisdiction of the San Francisco Redevelopment Agency is exempt from the ordinance. The Office of Affordable Housing Production Program approach is used here only as an evaluation tool. The estimated housing demand resulting from the project is calculated by multiplying the estimated project-related increase in employment (1,760 employees) by the fraction of San Francisco employees who live in the City (55%). This result, the approximate number of project-related employees who would live in the City (970), is then divided by the average number of San Francisco workers in households where San Francisco workers reside (1.6). The estimated housing demand would be about 605 units (1,760 x 0.55 ÷ 1.6 = 605).

4. City and County of San Francisco, *Downtown Plan Environmental Impact Report*, EE81.3, certified October 18, 1984.

5. Treadwell & Rollo, *Geotechnical Investigation: The Pacific Exchange, San Francisco, California*, May 8, 1998. This report is on file at the Planning Department, 5th Floor, 1660 Mission Street, San Francisco.

6. Treadwell & Rollo, *Geotechnical Investigation: The Pacific Exchange, San Francisco, California*, May 8, 1998. This report is on file at the Planning Department, 5th Floor, 1660 Mission Street, San Francisco.

7. Treadwell & Rollo, *Environmental Site Assessment, The Pacific Exchange Site, Folsom Street between Main and Spear Streets, San Francisco, California*, April 6, 1998. This report is on file at the Planning Department, 5th Floor, 1660 Mission Street, San Francisco.

8. U.S. Department of Housing and Urban Development, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing,* June 1995 (Chapter 7 revised 1997).

9. Archeo-Tec Consulting Archeologists, "Archival Cultural Resources Evaluation of Proposed Pacific Exchange Project Site (Assessor's Block 3740, Lots 27, 29, 30, 31 and 32), San Francisco California," March 12, 1998. This report is on file at the Planning Department, 5th Floor, 1660 Mission Street, San Francisco.

10. San Francisco Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that nonpotable water be used for dust control activities. Therefore, contractors would obtain reclaimed water from the San Francisco City Clean Water Program.

Appendix B
Wind

Wind Study prepared by Donald J. Ballanti, Certified Consulting Meteorologist

I. INTRODUCTION

The proposed project runs along the north side of Folsom Boulevard between Main Street and Spear Street in San Francisco. The existing site is occupied by surface parking and a low-rise building.

The proposed Pacific Exchange project would construct a new 17-story, 234-foot tall structure. The proposed Pacific Exchange building would include a three-level parking garage below grade. Above the parking garage, the Exchange building would contain a Trading and Technology Center and an office tower. The Trading and Technology Center would occupy floors one through five and would house the Exchange's equities and options trading floors, a technology and data center, and related support facilities and services. The tower, consisting of floors six through 17, would provide office space for the Exchange administration, member firms, other Exchange-related firms, as well as other users on a temporary basis.

Five scenarios were tested in the wind tunnel: (1) existing conditions, (2) conditions with the construction of the proposed project, (3) conditions with the construction of the project alternative, (4) conditions with the proposed project and approved GAP Building, and (5) conditions with the project alternative and the approved GAP Building..

A wind tunnel study was performed in investigate the pedestrian wind environment around the proposed project site. Pedestrian-level wind speeds were measured at selected points for the existing site and with the addition of the project and alternative in order to quantify wind impacts in public spaces near the site and predict the acceptability of wind conditions near the site.

II. METHODOLOGY

Wind Tunnel Facilities

The study was conducted in the Boundary Layer Wind Tunnel at the Department of Architecture, University of California, Berkeley. The interior dimensions of the wind tunnel duct are 5 feet high, seven feet wide and 45 feet long. The test area is 36 feet downwind of the inlet, with the fan downwind of the test area. Figures 1 and 2 show the construction and dimensions of the U.C. Berkeley wind tunnel.

Model and Boundary Layer

A scale model of the project site and the surrounding area was constructed. The model extended several blocks beyond the project boundaries in all directions. The GAP Building, located across Spear Street from the project site, has been approved but is not yet built. Because this building would be close enough to the project to possibly have cumulative impacts, the proposed project and alternative project were each tested with and without this structure.

Wind obstructions located further away from the project site were considered part of the general roughness of the site, and were modeled as part of the characteristic atmospheric boundary layer in the wind tunnel.

Simulation of the boundary layer in the natural wind is achieved by turbulence generators placed upwind of the test section. This allows for adjustment in the wind characteristics to provide for different model scales and varying terrain upwind of the project.

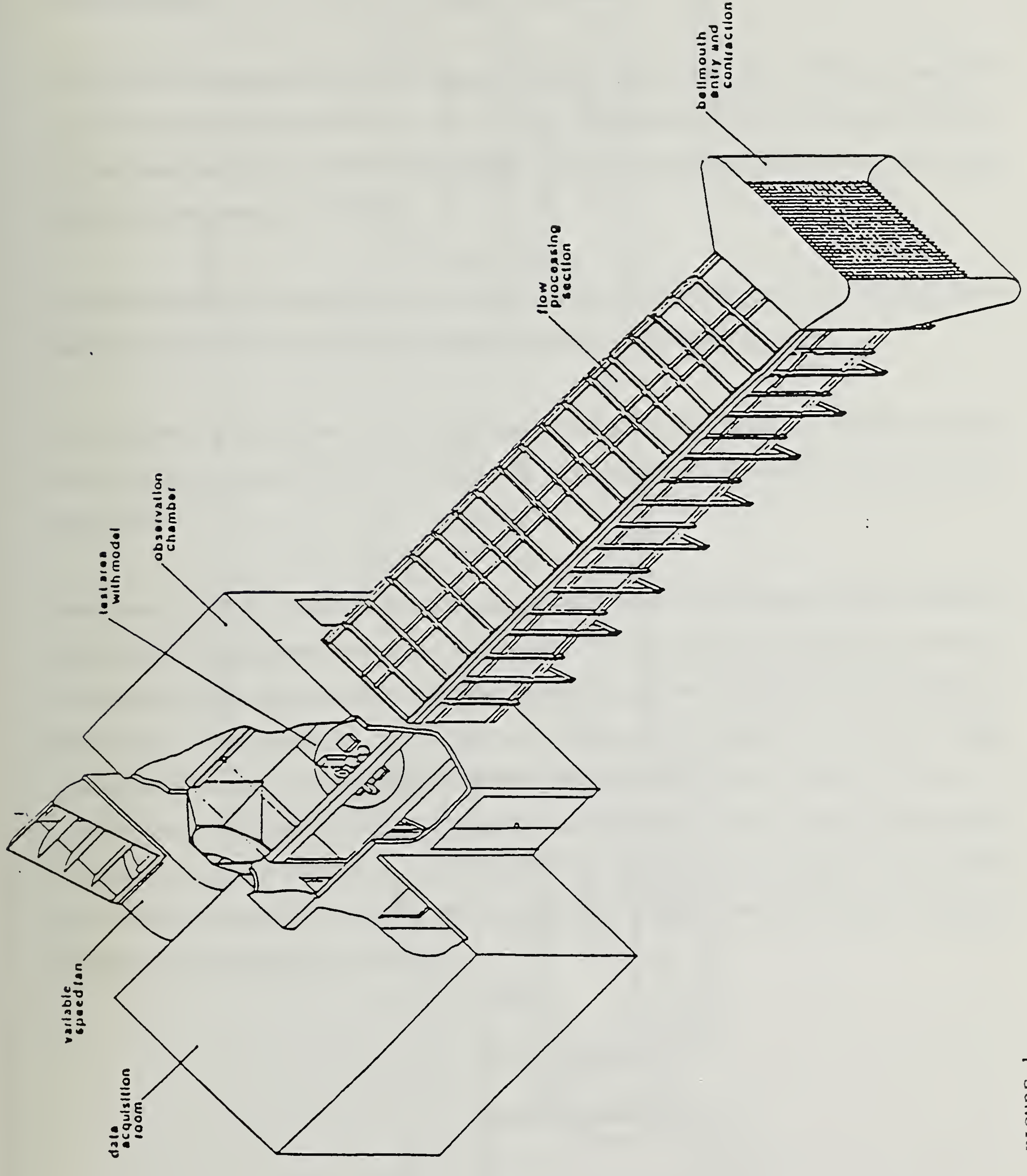


FIGURE 1
BOUNDARY LAYER WIND TUNNEL

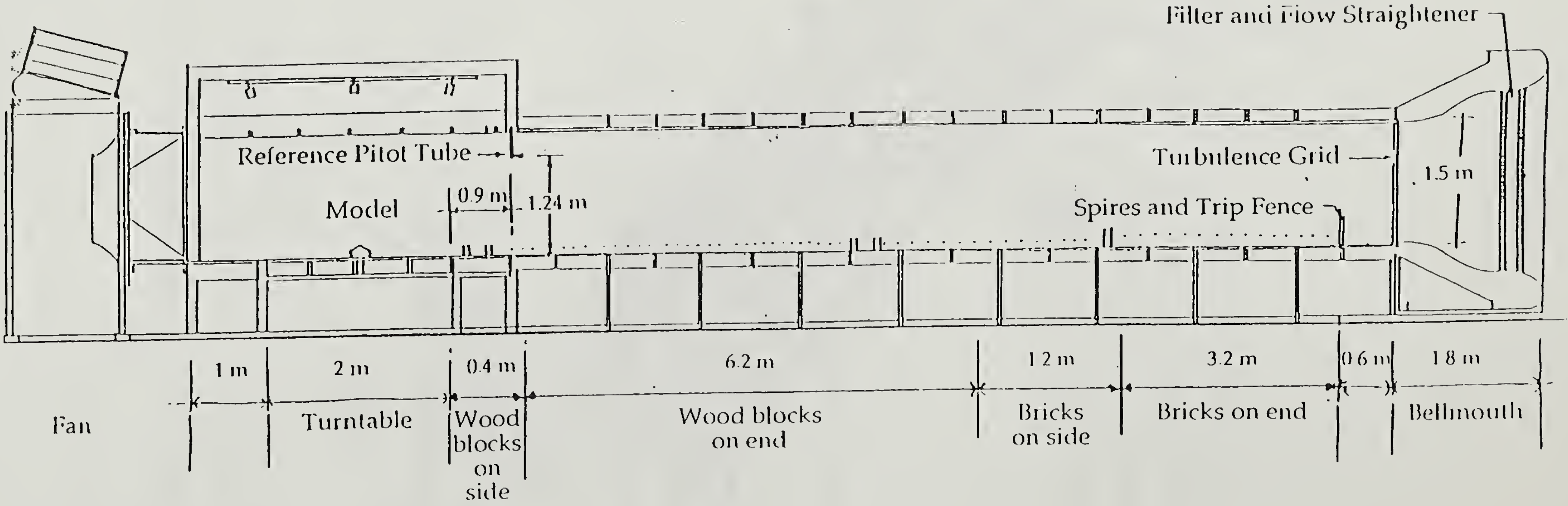


FIGURE 2: Boundary Layer Wind Tunnel Configuration

Instrumentation

The velocity measurements in this study were made with a TSI model 1266 and model TSI 1210-20 hot wire anemometers. Prior to commencement of the experiments both the probes were calibrated. Subsequent side-by-side comparisons between the two probes indicated agreement to within 5%.

A total of 35 velocity measurement locations were selected for this study located along sidewalk areas and other public spaces adjacent to and near the project site.

In accordance with the San Francisco Wind Ordinance methodology for wind tunnel tests the model was tested for four wind directions: northwest, west-northwest, west and west-southwest.

Each measurement consisted of simultaneous readings from two anemometer probes, one positioned at the desired pedestrian level location and the other at a stationary reference location above the wind tunnel floor. The axes of the probes were positioned vertically in all cases. The height of the reference sensor was selected to provide a stable characteristic reference velocity away from the influence of the building models and ground-level measurements. During each measurement the two velocity probes were sampled at a rate of 10 samples per second for a duration of 30 seconds. The collected data were analyzed to produce the quantities of interest: mean velocity, turbulence intensity, and equivalent wind speed.

III. CRITERIA AND HISTORICAL WIND RECORDS

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four MPH have no noticeable effect on pedestrian comfort. With winds from four to eight MPH, wind is felt on the face. Winds from 8 to 13 MPH will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 MPH, the force of the wind will be felt on the body. At 26 MPH to 34 MPH wind, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 MPH increase difficulty with balance and gusts can blow people over.[1]

The City of San Francisco Planning Code establishes wind criteria for C-3 Districts under Section 148 of the Planning Code. Section 148 of the Planning Code sets comfort levels of 7 MPH equivalent wind speed for public seating areas and 11 MPH equivalent wind speed for areas of substantial pedestrian use. In addition to comfort criteria San Francisco Planning Code establishes a wind hazard criterion. The hazard criterion is set at a hourly averaged windspeed of 26 MPH, which is not to be exceeded more than once during a year.

Predictions of wind speed are based upon historical wind records from the U.S. Weather Bureau weather station atop the old Federal Building at 50 United Nations Plaza during the years 1945-1950. This data base, comprised of 32,795 hourly observations is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

Table 1 shows that average wind speeds are greatest in the summer and least in the fall. Winds also exhibit a diurnal variation with the strongest winds occurring in the afternoon, and lightest winds occurring in the early morning.

Winds in San Francisco are most frequently from the west to northwest directions, reflecting the persistence of seabreezes. Wind direction is most variable in the winter. The approach of winter storms often results in southerly winds. Although not as frequent as westerly winds, these southerly winds are often strong. The strongest winds in San Francisco are typically from the south during the approach of a winter storm.[2]

Table 1: Seasonal Frequency of Wind Direction and Average Speed (Knots)

	January		April		July		October		Year	
Direction	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed
N	12.5	7.9	2.2	11.0	0.3	6.0	3.3	6.6	5.0	7.2
NNE	1.3	5.6	0.7	6.1	0.3	6.8	0.7	6.6	0.8	6.0
NE	4.5	5.3	1.3	4.7	1.1	7.4	2.2	5.8	1.9	5.6
ENE	1.4	6.3	0.6	4.8	0.2	5.1	0.8	5.1	0.8	5.6
E	11.9	4.8	2.6	4.5	0.1	3.9	4.8	4.5	4.8	5.0
ESE	2.11	6.4	0.3	5.2	0.1	2.5	0.6	5.8	0.8	5.8
SE	9.1	6.4	2.4	7.8	0.2	5.0	3.7	6.6	4.2	6.8
SSE	2.8	5.6	0.3	3.8	0.1	3.0	1.3	9.0	1.2	6.4
S	6.7	5.0	4.2	7.1	1.1	4.9	4.5	7.5	4.1	6.4
SSW	1.0	4.8	0.4	4.1	0.1	3.0	1.7	12.8	0.9	8.6
SW	4.5	8.0	7.7	9.2	15.6	10.1	7.8	9.1	9.3	9.3
WSW	1.0	5.9	1.7	7.1	1.2	8.1	2.8	8.8	2.4	8.6
W	13.2	7.2	43.0	10.9	53.0	13.1	34.6	9.1	35.7	10.9
WNW	7.5	11.1	20.7	14.1	14.9	14.5	15.2	10.9	13.8	12.7
NW	11.5	7.7	9.3	10.7	10.7	11.4	10.8	8.5	10.0	9.7
NNW	1.2	5.7	0.6	10.8	0.6	8.5	0.5	7.5	0.7	8.3
CALM	7.7	---	2.1	---	0.3	---	4.6	---	3.7	---

V. ANALYSIS

The San Francisco wind code is based on wind acceptability criteria defined in terms of "equivalent wind speed" (EWS). EWS denotes the mean hourly wind speed adjusted to account for the expected turbulence intensity or gustiness at the site. The wind speed limits in the code were developed with an inherent turbulence intensity of 15%. When the measured turbulence intensity at a point is greater than 15%, the equivalent wind speed is calculated by multiplying the mean velocity at the point by a weighting factor according to the following formula:

$$EWS = Vm\ (2*TI + 0.7)$$

where:

Vm = mean pedestrian-level wind speed
TI = turbulence intensity

For measured turbulence intensities less than 15%, EWS is taken to be equal to Vm.

The wind tunnel test data were used as input to a computer program that calculates the windspeed exceeded 10% of the time. The predicted winds can then be compared to the comfort criteria.

The windspeed that would be exceeded 10% of the time at each measuring location is shown in Table 2. The locations of measurement points are shown in Figure 3. All points are sidewalk locations where the 11 MPH comfort criterion is applicable.

Existing Conditions

No violations of the wind hazard criterion were measured for the existing scenario. The measured range of wind speeds was 4 to 17 mph. Exceedances of the pedestrian comfort criterion were found at 14 of the 35 sidewalk measurement locations for existing conditions.

Existing + Project

No violations of the wind hazard criterion were measured. This alternative had a mixed impact on wind, with 18 points having increased wind, 8 points having decreased wind and 9 points having unchanged winds (with respect to existing). The range of wind speeds was 5 to 15 mph. The number of locations exceeding the comfort criterion increased to 22.

Existing + Project + GAP

No violations of the wind hazard criterion were measured. This alternative had a mixed effect on wind (with respect to existing), with 13 points having increased wind, 10 points having decreased wind and 12 points having unchanged winds. Range of wind speeds was 3 to 16 mph. Number of locations exceeding the comfort criterion was 20.

Existing + Alternative Project

No violations of the wind hazard criterion were measured. This alternative has a mixed effect on wind, with 9 points having increased wind, 7 points having decreased wind and 19 points having unchanged winds. Range of wind speeds was 4 to 16 mph. Number of locations exceeding the comfort criterion increased to 15 out of 35.

Existing + Alternative Project + GAP

No violations of the wind hazard criterion were measured. This alternative had a mixed effect on wind (with respect to existing), with 13 points having increased wind, 12 points having decreased wind and 10 points having unchanged winds. Range of wind speeds was 3 to 15 mph. Number of locations exceeding the comfort criterion was 15.

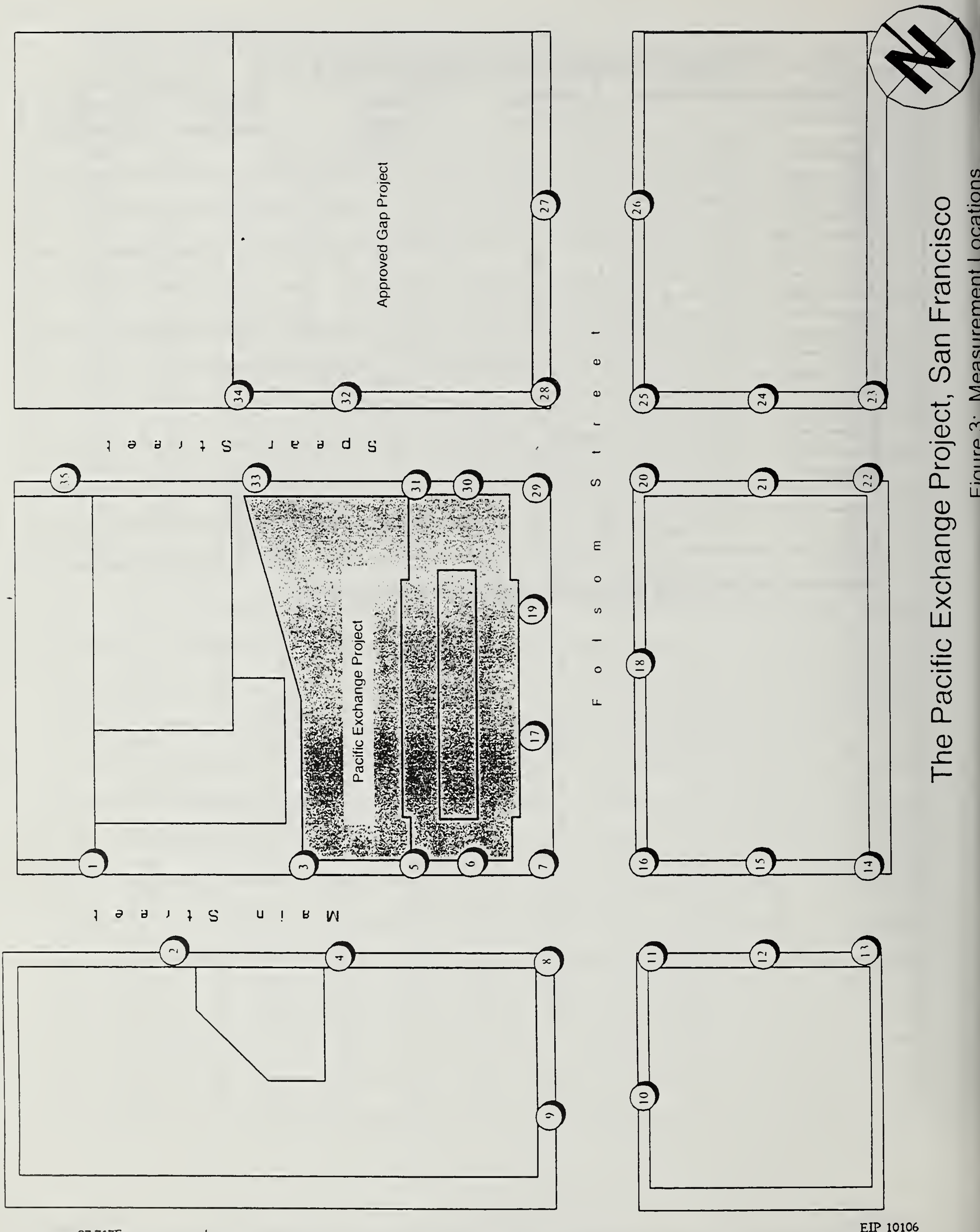
TABLE 2: Windspeed Exceeded 10% of the Time

Measurement Location	Existing	Existing + Project	Existing +Project +GAP	Existing +Alternative	Existing + Alternative+ GAP
1	**14**	**14**	**14**	**14**	**14**
2	8	**13**	**13**	**14**	**13**
3	**17**	**12**	**12**	**13**	**12**
4	7	10	10	9	9
5	10	10	10	11	10
6	11	**12**	**12**	11	11
7	**14**	**14**	**14**	**14**	**14**
8	**13**	**14**	**14**	**12**	**12**
9	**14**	**14**	**14**	**14**	**13**
10	**13**	**14**	**13**	**13**	**13**
11	**12**	**14**	**14**	**12**	**12**
12	**12**	**13**	**13**	**13**	**13**
13	6	6	5	6	6
14	8	8	8	8	8
15	**12**	**12**	**12**	**12**	**13**
16	**12**	**14**	**14**	**14**	**14**
17	5	4	3	5	4
18	10	9	5	7	7
19	4	5	5	4	3
20	7	**14**	**13**	11	9
21	9	6	6	9	9
22	**16**	**13**	**13**	**16**	**15**
23	**15**	**12**	**12**	**13**	**13**
24	7	9	9	8	9
25	10	**12**	10	10	6

TABLE 2: Windspeed Exceeded 10% of the Time (Cont.)

Measurement Location	Existing	Existing + Project	Existing +Project +GAP	Existing +Alternative	Existing + Alternative+ GAP
26	7	5	7	6	10
27	8	9	3	8	6
28	7	**13**	**15**	9	**12**
29	6	**12**	**16**	10	11
30	7	11	**14**	7	10
31	8	**12**	**16**	8	10
32	10	**13**	10	10	10
33	11	9	8	8	9
34	**12**	**12**	7	**12**	8
35	**14**	**15**	**14**	**15**	**15**

Measurements exceeding the comfort criterion are shown in **bold**.



The Pacific Exchange Project, San Francisco

Figure 3: Measurement Locations

VI. MITIGATION

Exceedances of the hazard wind criterion would be considered a significant adverse impact requiring appropriate mitigation. Since no exceedances of the hazard criterion were found for any of the scenarios tested, mitigation is not required.

1. Edward Arens, Designing for an Acceptable Wind Environment, Transportation Engineering Journal, March 1981.

2. E. Jan Null, Climate of San Francisco, Report No. NOAA-TM-NWS WR-126, 1978.

Appendix C
Transportation

TABLE C.1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS BASED ON DELAY

Level of Service	Stopped Delay (sec/veh)	Typical Traffic Condition
A	≤ 5.0	**Insignificant Delays:** Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
B	5.1 - 15.0	**Minimal Delays:** Generally good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay. Drivers begin to feel restricted.
C	15.1 - 25.0	**Acceptable Delays:** Fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear, though many still pass through the intersection without stopping. Most drivers feel somewhat restricted.
D	25.1 - 40.0	**Tolerable Delays:** The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1 - 60.0	**Significant Delays:** Considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles and long queues of vehicles form upstream.
F	> 60.0	**Excessive Delays:** Considered to be unacceptable to most drivers. Often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay levels. Queues may block upstream intersections.

Sources: *Highway Capacity Manual*, Special Report No. 209, Third Edition, Transportation Research Board, Washington, D.C. 1985 (Updated 1994); Korve Engineering, Inc.

Appendix D
Air Quality

D. AIR QUALITY

Criteria pollutants are described briefly below. They include ozone (and its precursors, ROG and NO_x), CO, NO_2, SO_2, and PM_{10}.

OZONE

Ozone is a secondary pollutant that forms from the interaction of ROG and NO_x in the presence of sunlight. Motor vehicles are the primary sources of ROG and NO_x in the Bay Area. Ozone standards have been violated most often in the Santa Clara, Livermore, and Diablo Valleys because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

CARBON MONOXIDE

In 1995, about 65% of the CO in the Bay Area was generated by motor vehicles./1/ The one-hour and eight-hour CO standards have been occasionally exceeded in San Francisco, San Jose, and Vallejo, which are areas with high traffic volumes and frequent surface inversions during the winter months. Future compliance strategies include stricter motor vehicle emission limits statewide, with local biannual motor vehicle inspection/maintenance and transportation control measures.

PARTICULATE MATTER

Particulate levels in the Bay Area are low near the coast. Levels increase with distance inland and reach their highest levels in dry, sheltered valleys, such as the Santa Clara, Diablo, and Livermore Valleys. The largest human-caused sources are motor vehicle travel over paved and unpaved roads, demolition and construction activities, and agricultural operations and burning. Natural sources (i.e., wind-raised dust) are also significant. Particulate standards refer to particulates that are small enough to be inhaled (i.e., PM_{10}, those less than 10 microns in diameter) or $PM_{2.5}$, those less than 2.5 microns in diameter./2/ The state ambient air quality standards for PM_{10} are exceeded regularly in the Bay Area.

NITROGEN DIOXIDE

The major sources of NO_x are vehicular, residential, and commercial fuel combustion. Concentrations of NO_2, the most abundant form of ambient NO_x, are highest in the South Bay. No NO_2 standard violations have been measured at any monitoring station in the Bay Area since the early 1980's.

SULFUR DIOXIDE

Burning of high sulfur fuels for activities such as electricity generation, petroleum refining, and shipping is the major source of SO_2. The highest SO_2 levels are recorded by monitoring stations located in a relatively narrow crescent along the San Francisco Bay shore of northern Contra Costa County, where major petroleum refineries are located. The SO_2 standard is currently being met throughout the Bay Area.

LEAD

The Bay Area is in attainment for both the federal lead standard of 1.5 micrograms per cubic meter (based on a calendar quarter averaging time) and state lead standard of 1.5 micrograms per cubic meter (based on a 30-day average). Lead concentrations have dropped substantially since the introduction of unleaded gasoline. In the last 15 monitoring years, ambient concentrations have not approached the lead standards, and no violations have been reported. The highest concentration recorded in 1996 was 0.48 microgram per cubic meter, approximately one-third of the standard.

Federal and state standards for these pollutants are presented in Table D.1.

TABLE D.1
FEDERAL AND STATE AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standard/a/	Federal Standard/b,c/
Ozone	1-hour	0.09 ppm	0.12 ppm
Carbon Monoxide	1-hour	20.00 ppm	35.00 ppm
	8-hour	9.00 ppm	9.00 ppm
Nitrogen Dioxide	1-hour	0.25 ppm	—
	Annual Average	—	0.053 ppm
Sulfur Dioxide	1-hour	0.25 ppm	—
	3-hour	—	1,300 $\mu g/m^3$
	24-hour	0.04 ppm	365 $\mu g/m^3$
	Annual Average	—	80 $\mu g/m^3$
Particulate Matter	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$
(PM_{10})	Annual Geometric Mean	30 $\mu g/m^3$	—
	Annual Arithmetic Mean	—	50 $\mu g/m^3$

Notes:

ppm = parts per million by volume
$\mu g/m^3$ = micrograms per cubic meter
— = No standard in this category

a. California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM_{10}) are values that are not to be exceeded.

b. National standards, other than for ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is "not exceeded" when the expected number of days per calendar year with maximum hourly average concentration above the standard is equal to or less than one.

c. In July 1997, the U.S. EPA promulgated new standards for both ozone and particulate matter. There may be legislative or legal changes to the new standards. The U.S. EPA's new ozone standard is 0.08 ppm averaged over eight hours, rather than the existing 0.12 ppm averaged over one hour. Under the new ozone standard, it will be much more difficult for the Bay Area to achieve compliance. The former particulate standards limited concentrations of particulate matter less than 10 microns in diameter (PM_{10}). Due to increased concern over smaller particulate matter being responsible for health impacts, the new standards limit concentrations of particulate matter 2.5 microns or less in diameter ($PM_{2.5}$). The new standard will be implemented in 2000 as the attainment status is being based on 1997, 1998, and 1999 monitoring data.

Source: EIP Associates.

The potential human health effects of these air pollutants are presented in Table D.2.

TABLE D.2
HEALTH EFFECTS SUMMARY OF THE MAJOR CRITERIA AIR POLLUTANTS

Air Pollutant	Adverse Effects
Ozone	Eye irritation. Respiratory function impairment.
Carbon Monoxide	Impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin. Aggravation of cardiovascular disease. Impairment of central nervous system function. Fatigue, headache, confusion and dizziness. Can be fatal in the case of very high concentrations in enclosed places.
Nitrogen Dioxide	Risk of acute and chronic respiratory illness.
Sulfur Dioxide	Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory illness.
Particulate Matter (PM_{10})	Increased risk of chronic respiratory illness with long exposure. Altered lung function in children. With SO_2, may produce acute illness.
Particulate Matter ($PM_{2.5}$)	May be inhaled and possibly lodge in and/or irritate the lungs.

Source: Bay Area Air Quality Management District Air Quality Handbook, 1993; Zannetti, Paolo, *Air Pollution Modeling*, 1990.

NOTES - Air Quality Appendix

1.BAAQMD, *1994 Clean Air Plan*, 1994.

2.In July 1997, the U.S. EPA promulgated new standards for both ozone and particulate matter. There may yet be changes to the new standards.

PLACE
POSTAGE
HERE

San Francisco Planning Department
Office of Environmental Review
1660 Mission Street, 5th Floor
San Francisco, CA 94103

Attn: Carol Roos, EIR Coordinator
97.717E - Pacific Exchange

PLEASE CUT ALONG DOTTED LINE

RETURN REQUEST REQUIRED FOR FINAL ENVIRONMENTAL IMPACT REPORT

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

TO: San Francisco Planning Department,
Office of Environmental Review

Please send me a copy of the Final EIR.

Signed: ______________________________

Print Your Name and Address Below

____

____